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**Gateway Clean Air Program
RapidScreen Startup Report
October 1999 – March 2001**

Prepared for:

Missouri Department of Natural Resources

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Glossary of Terms and Abbreviations

Basic I/M	A set of vehicle I/M program inspection requirements defined by the U.S. EPA that may be used in areas not required to implement an Enhanced I/M program; the inspection procedure usually involves idle testing
Clean Screening	The process of identifying vehicles with low emissions that are then exempt from emission inspection at an inspection station
CO	Carbon monoxide
CO2	Carbon dioxide
Cutpoint	An emissions level used to classify vehicles as having met an emissions inspection requirement
Enhanced I/M	A set of more rigorous vehicle I/M program inspection requirements defined by the U.S. EPA that usually involves IM240 testing
EPA	United States Environmental Protection Agency
ESP Missouri	Environmental Systems Products Missouri Inc., the MDNR's contractor for the Gateway Clean Air Program
Excess Emissions	Vehicle emissions that exceed an I/M cutpoint
FTP	Federal Test Procedure
g/mi	Grams per mile, the units of measurement for FTP and IM240 tests
GVWR	Gross Vehicle Weight Rating
HC	Hydrocarbons
High Emitter Identification	The on-road identification of vehicles with high emission levels
I/M	Inspection and maintenance program
Idle Test	A tailpipe emission test conducted when the vehicle is idling and the transmission is not engaged
IM240 Test	A loaded-mode transient tailpipe emission test conducted when the vehicle is driven for up to 240 seconds on a dynamometer, following a specific speed trace that simulates real world driving conditions
kW/t	Kilowatts per metric ton, the units of measurement for vehicle specific power
LDGV	Light-duty Gasoline-powered Vehicle

LDGT	Light-duty Gasoline-powered Truck
LEI	Low Emitter Index
MDNR	Missouri Department of Natural Resources, the oversight agency for the Gateway Clean Air Program
MDOR	Missouri Department of Revenue, the state agency responsible for vehicle registration renewal and tracking
NOx	Oxides of nitrogen, usually measured as nitric oxide (NO)
Repairable Emissions	The emission reductions that can be obtained by repairing a vehicle. The amount of repairable emissions is equal to or greater than the amount of excess emissions
RS≡A	Remote Sensing Air Inc., a St. Louis-based company that ESP Missouri has contracted to conduct RapidScreen quality assurance
RSD	Remote Sensing Device
VIN	Vehicle Identification Number
VDR	Vehicle On-road Record
VMR	Vehicle RapidScreen Mailing Record
VMT	Vehicle Miles Traveled
VSP	Vehicle Specific Power; estimated engine power divided by the mass of the vehicle
VTR	Vehicle Test Record

I. Summary

The Missouri Department of Natural Resources operates a vehicle emissions inspection and maintenance program to improve air quality in the greater St. Louis metropolitan area. The Gateway Clean Air Program consists of an enhanced biennial I/M program in Jefferson County, St. Charles County, St. Louis County and St. Louis City and an annual basic I/M program in Franklin County. The centralized program is operated by a contractor, Environmental Systems Products Missouri.

The Gateway Clean Air Program is the first I/M program in the country to integrate clean screening from the outset as a means of improving motorist convenience and reducing the overall number of inspection lanes required. The program design includes a two model year new vehicle exemption accounting for 11-15% of vehicles with a further 25%-29% of vehicles to be selected using clean screening methods to meet a combined 40% clean screening goal. The contractor is required to report annually on the effectiveness of the clean screening program known as RapidScreen.

Preliminary remote sensing data collection started in October 1999. The first pilot RapidScreen notices were issued in the first quarter of 2000. Full RapidScreen processing and full testing at stations commenced in April 2000. This first RapidScreen audit report covers the preliminary six-month startup period from October 1999 through March 2000 and the first twelve months of full program operations from April 2000 through March 2001.

A. *RapidScreen Effectiveness*

RapidScreen notices were sent to 290,000 owners of vehicles due to renew registration through March 31, 2001. Due to the newness of the program, there was an initially low response rate by vehicle owners to the notices. Therefore, only 190,000 vehicle owners had taken advantage of the program by the end of March 2001. This 65.5% redemption rate represents 23% of St. Louis area vehicle registrations. New model vehicles exemptions are estimated to be 15% of registrations during the period. Therefore, with total exemptions of 38%, the program came close to achieving the 40% clean screening goal despite the initially low vehicle owner response rate. Section III. of this report contains specific information on the build-up of the database of on-road measurements and the monthly RapidScreen notices issued and redeemed.

Quality control and quality assurance are important elements to the success of the RapidScreen program. The tag editing of license plate images is controlled using 10% quality assurance samples. The average QA error rate in the RapidScreen notice processing is 0.4% from tag edit errors and 1.6% from other sources. All errors identified are corrected. Additional statistics on quality control and quality assurance activities are provided in section III. C.

The emissions effectiveness of the RapidScreen program has been calculated using the results of a random 2% audit sample of vehicles identified as clean by the RapidScreen program. Instead of receiving a RapidScreen notice, these vehicles are tested at the inspection stations. The audit sample test results are then used to calculate the air quality impact of exempting the RapidScreen vehicles from a station-based test. The calculations are described in section IV. and section VII.

The RapidScreen program retained 96.1% of HC tailpipe reductions, 80% of gas cap related HC reductions, 97.2% of CO reductions and 88.2% of NOx reductions of the Gateway Clean Air Program.

The RapidScreen program met its goal of substantially improving motorist convenience for nearly 40% of the vehicles while retaining over 95% of the available HC emissions reductions. Emissions reduction effectiveness is expected to improve in the remaining months of 2001 as use of the low emitter index alone has been discontinued. The elimination of low emitter indexing, however, will make attainment of the RapidScreen goal of exempting 40% of the vehicles more difficult for the contractor to achieve.

B. On-Road Fleet Emissions

The approximately five million measurements collected for the RapidScreen program have been used to establish the emissions characteristics of the on-road fleet. The reduced emissions level of vehicles repaired as a result of the Gateway Clean Air Program is clearly observable in the on-road emissions. These results are illustrated in section V. C.

C. Lessons Learned

In general, the public response to the RapidScreen program has been positive. However, several program changes were made during the startup period to maintain this positive response.

- The design of the RapidScreen mailer is critical to obtaining a high response rate from motorists who are suspicious of requests for money arriving through the mail. The original design had a return address of "Gateway Clean Air Program" and looked too colorful to be considered official government business. Consequently, many motorists did not respond. A black and white design with the state seal and "Missouri Department of Natural Resources" in the return address was instituted, and the response rate increased to as high as 80%.
- Although the RapidScreen program is designed to benefit motorists by increasing the convenience of the Gateway Clean Air Program, better public information efforts should have preceded the rollout of fee-based RapidScreening to avoid the perception that the RapidScreen notice was junk mail or too good to be true. It was also important to reassure the public that the information collected by remote sensing will not be used for other purposes.
- When the low emitter indexing RapidScreening method was used, a small percentage of inactive vehicles or vehicles operating out-of-state received notices. Administrators considering a program using a low emitter index without the benefit of an on-road measurement to verify that the vehicle is being operated in the area are advised to run focus groups to judge public reaction to this method before proceeding. Negative public perception in Missouri led to the discontinuation of the use of the low emitter indexing

method. Whether or not this discontinuation could have been prevented with additional up front public information messages is unknown.

Suggestions for future RapidScreen program changes and additional evaluation are provided in section VIII.

II. Program Description and Reporting Requirements

A. *RapidScreen and I/M Program Elements*

1. *I/M Program Overview*

The Gateway Clean Air Program implemented in the St. Louis metropolitan area consists of a centralized enhanced biennial I/M program in Jefferson County, St. Charles County, St. Louis County and St. Louis City and a centralized basic annual I/M program in Franklin County. The program tests gasoline-powered passenger vehicles under 8,500 pounds Gross Vehicle Weight Rating (GVWR). Station-based testing began on April 5, 2000, for May 2000 vehicle registrations. In the Enhanced area, even model year January to April vehicle registrations were scheduled for testing later during the year. In the Basic area, January to March vehicle registrations were exempted from testing. EPA-recommended phase-in IM240 cutpoints are currently in use in the Enhanced area. EPA-recommended idle test cutpoints are currently in use in the Basic area.

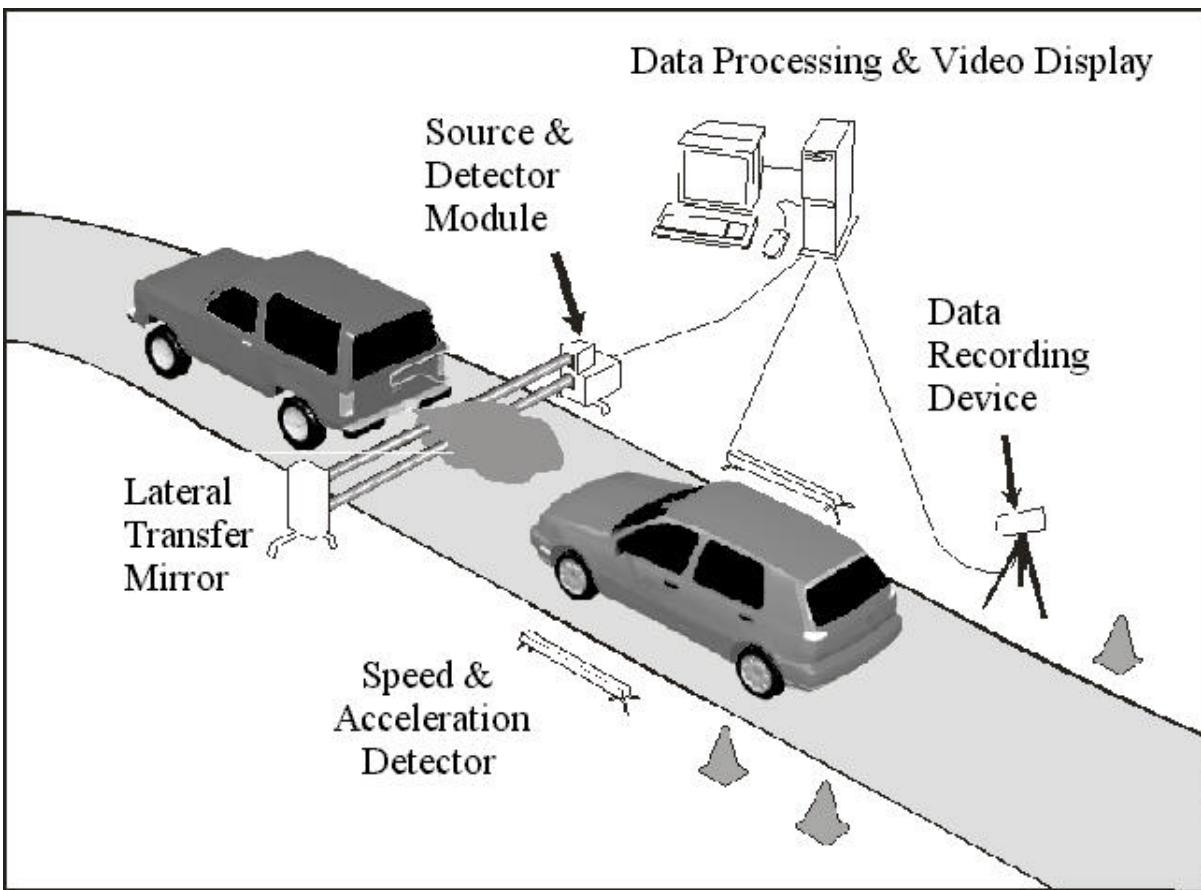
The Missouri Department of Natural Resources (MDNR) oversees the Gateway Clean Air Program. Testing operations have been contracted through a competitive bid process to Environmental Systems Products (ESP) Missouri.

The Gateway Clean Air Program is the first I/M program in the country to incorporate clean screening from the outset. Clean screening is a relatively new I/M program feature announced by the U.S. EPA in a guidance document issued in May 1998 that allows low emitting vehicles to be exempted from emission testing at inspection stations. On-road vehicles are typically measured using remote sensing devices (RSD). The typical setup is illustrated in Figure II-1. Those vehicles that are determined to have emissions below specific cutpoints are exempted from having to come to an emissions testing station to obtain their emissions test. The clean screening program implemented in Missouri is known as RapidScreen.

RapidScreen was designed into the Gateway Clean Air Program to maximize motorist convenience. Up to 40% of the vehicles do not have to be emission tested at a test station. Owners of these vehicles can forego the travel to a test station, which is estimated to be an average round-trip distance of 8 miles and an average travel time of 30 to 45 minutes, in addition to the time actually spent at the test station.

Vehicles registered in the Basic area can opt to obtain a biennial enhanced inspection instead of the annual basic test. Therefore, Franklin County vehicles are also able to participate in the RapidScreen program.

Figure II-1 On-road Remote Sensing Setup



2. *RapidScreen Methods*

The RapidScreen program design includes a statutory exemption for the first two model year vehicles accounting for 11-15% of vehicles, with a further 25%-29% of vehicles to be selected using clean screening methods to meet the 40% RapidScreen goal. During the first three and a half years of the program, 20% of vehicles are to be selected for RapidScreening using remote sensing.

Three clean screening methods are used to select vehicles for the RapidScreen program:

- RSD – the vehicle passed the two most recent RSD measurements made on different days.
- Hybrid – the vehicle passed the most recent remote sensing measurement and meets low emitter index cutpoints.
- LEI – the vehicle is a make/model that has performed well on past emissions tests and meets low emitter index cutpoints.

Additional details about the three clean screening methods are provided in Missouri I/M Program Clean Screening Plan¹.

The original MDNR design called for the contractor to select 20% of the vehicles for RapidScreening using the RSD method described in the EPA Clean Screening Guidance document². This method uses the two most recent RSD measurements for a vehicle collected on different days within the twelve months prior to the registration renewal date. The remaining 5-9% of vehicles were to be selected for RapidScreening using either the EPA-approved LEI method or an alternative method that has been approved by the EPA and the MDNR. In their response to the MDNR Request For Proposals, ESP proposed to use both the LEI method and the Hybrid method, which is an alternative method, for the remaining 5-9%.

ESP Missouri could not meet the 20% RSD goal during the startup period. To avoid wait time problems at the test stations during Gateway Clean Air Program startup, MDNR approved ESP Missouri's 2000 RapidScreen Plan which called for the broader use of the Hybrid and LEI methods. Although the Hybrid method has not yet been approved by the EPA, audit data (See section IV.) indicates that the Hybrid method is a viable clean screening method. Based upon this information, ESP Missouri has proposed to continue using the Hybrid method in its 2001 RapidScreen Plan.

The RapidScreen cutpoints used for the RSD method are 200 ppm HC, 0.5% CO and 2,000 ppm NOx. Vehicle emissions must be below all three values on the most recent two measurements in order to be eligible for a RapidScreen notice.

With the Hybrid method, vehicles are only measured on-road once. Therefore, slightly tighter cutpoints of 200 ppm HC, 0.5% CO and 1,500 ppm NOx are used for the Hybrid RSD measurement. The vehicle emissions must be below all three RSD cutpoints on the most recent measurement. In addition, low emitter index predicted reductions for the vehicle must be less than 0.15 g/mi HC, 2 g/mi CO and 0.05 g/mi NOx.

In the LEI method, the vehicle is not measured on-road at all. In order to ensure selection of the cleanest vehicles, the RapidScreen cutpoints used for the LEI method were at least as stringent as those used in the Hybrid method.

B. Reporting Requirements

1. RapidScreen Reporting Requirement

ESP Missouri, the vehicle emissions testing contractor for Missouri Department of Natural Resources, conducts the RapidScreening program as part of the Gateway Clean Air Program. The contract requires the ESP Missouri to report annually:

- The number of vehicles clean screened broken down by vehicle year, make and model and by county and ZIP code (See section III. B.);
- Information regarding the random sample of vehicles required to undergo emissions testing instead of being clean screened, including, but not limited to, a comparison of the remote sensing records, vehicle profile or model year compared with the actual emissions testing records of the random sample (See sections IV. B. and IV. C.).

2. On-Road Reporting Requirement

The Clean Air Act Amendments of 1990 require enhanced I/M programs to supplement the station-based testing with an on-road/remote sensing-based high emitter identification element.

The Code of Federal Regulation (CFR), chapter 40, section 51.371, defines on-road testing as “the measurement of HC, CO, NOx and/or CO₂ emissions on any road or roadside in the nonattainment area or the I/M program area. On-road testing is required in enhanced I/M areas and is an option for basic I/M areas.”

The general requirements are:

- (1) On-road testing is to be part of the emission testing system, but is to be a complement to testing otherwise required.
- (2) On-road testing is not required in every season or on every vehicle but shall evaluate the emission performance of 0.5% of the subject fleet, including any vehicles that may be subject to the follow-up inspection provisions of paragraph (4) below, each inspection cycle.
- (3) The on-road testing program shall provide information about the emission performance of in-use vehicles by measuring on-road emissions through the use of remote sensing devices or roadside pullovers including tailpipe emission testing. The program shall collect, analyze and report on-road sensing data.
- (4) Owners of vehicles that have previously been through the normal periodic inspection and passed final retest and found to be high emitters shall be notified that the vehicles are required to pass an out-of-cycle follow-up inspection; notification may be by mailing in the case of remote sensing on-road testing or through immediate notification if roadside pullovers are used.

Although the Gateway Clean Air Program is an enhanced I/M program, the St. Louis nonattainment area is only required to meet the basic I/M program performance standard. Therefore, while the Gateway Clean Air Program is collecting, analyzing and reporting on-road information (See section V.), owners of vehicles identified as high emitters have not, to date, been notified or required to bring their vehicle to an emission test station for an out-of-cycle test.

C. Sources of Data

Data used in the analyses in this report are primarily drawn from the RSD unit measurements, the database of vehicle registrations and the I/M test database maintained on ESP Missouri’s host computer system.

The following sections describe the key information in the host computer system.

I. Remote Sensing Information

RSD Measurements: RSD Unit, Date and Time, Vehicle Plate, HC, CO, CO₂, NOx, speed and acceleration.

RSD Deployment: Unit number, Date, Shift, Site.

RSD Sites: Site Reference, Description of location, Slope of site in degrees.

2. Low Emitter Index

The low emitter index is a table indexed by vehicle model year, make and model. It contains estimates of failure rates and repairable emissions for each make/model based on the results of two million IM240 tests in Colorado and Illinois. Although Illinois does not fail vehicles for NOx, NOx is measured, and there are advisory NOx standards in place. The LEI table was constructed using the assumption that Illinois vehicles were being failed and repaired for high NOx emissions.

The low emitter index is updated periodically, and station-based results from the testing of Missouri vehicles will be incorporated into this LEI table.

3. Vehicle Registration Data

The vehicle registration table (VRR) contains information about each registered vehicle, including the unique vehicle identification number (VIN), the vehicle plate, make, model, model year, fuel type, owner name and address, zip code and county.

4. Gateway Clean Air Program Data

Several tables contain emissions test information:

- VDR – contains the valid remote sensing measurements for vehicles with Missouri plates.
- VMR – contains the RapidScreen mailer record that contains reference to the RSD measurements or LEI status that makes a vehicle eligible for RapidScreen.
- VTR – the primary repository for all emission test results, including records for vehicles that have completed the RapidScreen process. The VTR has links to the VMR tables. The VTR contains a result that indicates whether and by what method vehicles were RapidScreened. A RapidScreen status indicator identifies vehicles selected as part of the RapidScreen audit sample and the RapidScreening method used.

Remote sensing records are first stored in the VDR table. Each month, registration records for vehicles that are due to renew and are subject to the inspection program are identified. The VDR table is scanned to identify matching remote sensing records that are then analyzed to identify the vehicles that have qualified for RapidScreen. The registration and remote sensing information for qualifying vehicles is written to the VMR file. After quality control and quality assurance checks have been completed (See section III. C.), the VMR file is used to generate RapidScreen notices that are mailed to vehicle owners. If a vehicle owner chooses to redeem the notice, the RapidScreen result is recorded in the VTR table.

5. RapidScreen Random Audit Sample

Two percent of the vehicles that qualify for RapidScreen are randomly selected for the RapidScreen audit sample. These vehicles are not mailed RapidScreen notices and instead receive

a station-based emissions inspection. As noted earlier, the results of the station inspections for RapidScreen audit sample vehicles are stored in the VTR table.

III. RapidScreen Operations

A. Monitoring Activities

1. Sites used

Seventy-four sites were used during the startup period (See Appendix A1). Approximately 60 sites have been used to collect 93% of the remote sensing measurements. Some remote sensing data have been collected from a number of other sites whose use has been discontinued for a variety of reasons. Information retained about each site includes the type of site, e.g. on-ramp or surface street, cross streets, city/county, township, zip code, slope. The slope of a site combined with vehicle speed and acceleration is used to determine the specific power output of the vehicle engine at the time the remote sensing measure is made. At preferred sites, a majority of vehicles are operating with moderate engine power.

Vehicle specific power (VSP)^{3,4} is a useful measure of the vehicle load in kilowatts per metric ton (kW/t). The engine power output of a vehicle passing a remote sensing unit depends upon the grade of the site, the vehicle speed and the vehicle acceleration. The grade of the site is measured during the site selection process. Speed and acceleration are measured for each vehicle. Ideally, vehicles passing remote sensing units will have a VSP in the 5-25 kW/t range. Above and below these power levels, tailpipe concentrations can be significantly higher than normal. At low power levels, engines virtually shut down and yield only a small volume of tailpipe gas. This can result in significantly higher pollutant concentrations than when the engine is running normally even though the mass of pollutants is quite small. At high power levels, vehicles are likely to be operating in a commanded enriched fuel/air ratio. The Federal Test Procedure (FTP) used to certify new vehicles only simulates VSP levels of up to 22 kW/t. Above this level, vehicles are often designed to use enriched mixtures to obtain more power.

For clean screening, the VSP range is only important to the extent it may prevent a vehicle from being RapidScreened. Measurements made when the vehicle is outside the controlled range may prevent the vehicle from meeting the clean screening cutpoints even though it is operating correctly.

For fleet evaluation and high emitter identification, it is useful to use remote sensing measurements that are within the range of engine operating conditions over which emissions are intended to be controlled.

2. RSD Units

The remote sensing units deployed in Missouri are RSD-3000 mobile units also called AccuScanTM. The design is based on a technical platform developed at the University of Denver by Dr. Donald Stedman. ESP engineers have commercialized this equipment and continue its development.

The mobile unit includes the equipment required to provide measurement of emissions as well as speed and acceleration readings and license plate software. Five main components comprise the RSD-3000 system:

- Infrared and ultraviolet source and detector modules;
- Video system;
- Control console with computer system;
- Laser-based speed and acceleration measurement system;
- License plate tag editing system.

The primary combustion gases HC, CO and CO₂ are measured simultaneously along the same optic path to ensure the proper application of the combustion gas equations. HC and CO are measured using the infrared beam, and NOx is measured using the ultraviolet beam. To avoid interference between vehicles, the RSD-3000 unit is capable of completing the vehicle emission measurement within 0.6 second and all measurements for a vehicle including emissions, speed, acceleration and license plate image within one second.

The RSD unit takes multiple rapid readings for each vehicle to characterize the exhaust plume profile and evaluate whether a valid measurement of a vehicle's exhaust has been achieved. The criteria include how much vehicle exhaust plume is available for the duration of a 0.6 second sampling period, evaluation of whether plume measurements are consistent with normal plume dissipation, and correction for changes in background concentrations of emissions.

RSD units are certified to meet accurate measurement of calibration gas trailed by a specially-modified vehicle under controlled conditions using quad-blend (CO₂, HC, CO, NOx) calibration gases. The RSD tolerance for each pollutant is:

- Hydrocarbon (HC): ±150 parts per million (ppm) or ±15% of the expected HC concentration {whichever is greater} throughout the range of HC concentrations. Hydrocarbon measurements are expressed in their hexane equivalent measurement.
- Carbon monoxide (CO): 0.25% CO or ±10% of the CO value {whichever is greater} for all expected concentrations less than or equal to 3.0%, and ±15% for all CO expected concentrations above 3.0% CO.
- Oxides of nitrogen (NO_x): ±250 parts per million (ppm) or ±15% of the expected NO_x concentration {whichever is greater} throughout the range of NO_x concentrations.

The mobile unit is equipped with a speed and acceleration measurement system that uses extremely accurate low energy lasers to calculate the speed of the vehicle to within +/- 0.5 mile per hour and acceleration to within +/- 0.3 miles per hour per second at the moment exhaust is measured.

The system captures emissions readings and rear pictures of vehicles that pass through the RSD beam. The video and emissions readings taken are stored directly on a removable media disk and can be used for future reference.

3. Number of Measurements

Table III-1 provides a monthly summary of the data collection statistics by record, dataset and shift. A calendar year summary is provided at the foot of the table. A dataset is a unique set of data collected by one RSD unit at one site on one day. The data may have been collected over either one or two shifts. The shift is a collection period of one remote sensing unit operated by one operator for a given shift period.

Water droplets in the air interfere with remote sensing operation. Remote sensing units are not operated in the rain and snow or when there is excessive spray from tires. Freezing weather can also cause water vapor in the tailpipe exhaust stream to rapidly condense into mist and prevent remote sensing units from operating. The relatively low number of records and percent of valid records collected in December 2000 and February 2001 were due to the poor weather conditions described above that reduced the number of days of operation.

A total of 5.6 million remote sensing records were collected during the twelve months ending March 31, 2001.

Table III-1 Summary of Data Collection Through March 2001

Year	Month	Avg. Units	Active		Records Per		Avg. Records Per Shift	Total Records
			Days	Datasets	Dataset	Shifts		
1999	10	1	14	14	3,619	14	3,619	50,666
1999	11	2	16	26	2,660	26	2,660	69,162
1999	12	3	20	55	3,206	55	3,206	176,354
2000	1	4	18	67	2,504	67	2,504	167,785
2000	2	5	21	95	2,862	95	2,862	271,894
2000	3	5	23	109	2,864	117	2,668	312,136
2000	4	4	20	83	3,642	102	2,963	302,246
2000	5	3	22	76	3,757	101	2,827	285,503
2000	6	4	20	79	3,336	86	3,064	263,546
2000	7	4	23	93	4,095	112	3,401	380,881
2000	8	6	25	160	4,422	234	3,024	707,501
2000	9	7	25	182	3,448	259	2,423	627,461
2000	10	6	26	162	4,718	256	2,985	764,276
2000	11	8	20	151	4,533	224	3,056	684,536
2000	12	6	11	68	4,459	121	2,506	303,210
2001	1	5	22	120	3,796	206	2,211	455,468
2001	2	5	20	91	3,613	161	2,042	328,775
2001	3	5	23	109	4,515	196	2,511	492,172
Total	18		369	1,740	3,818	2,432	2,732	6,643,572

Year	Active Months	Active		Avg. Units	Per Month	Per Month	Avg.		Records Per Month
		Days	Datasets				Records Per Dataset	Shifts Per Month	
1999	3	1.9	16.67	1.9	32	32	3,118	32	3,118
2000	12	5.2	21.17	5.2	110	110	3,827	148	2,858
2001	3	4.9	21.67	4.9	107	107	3,989	188	2,267

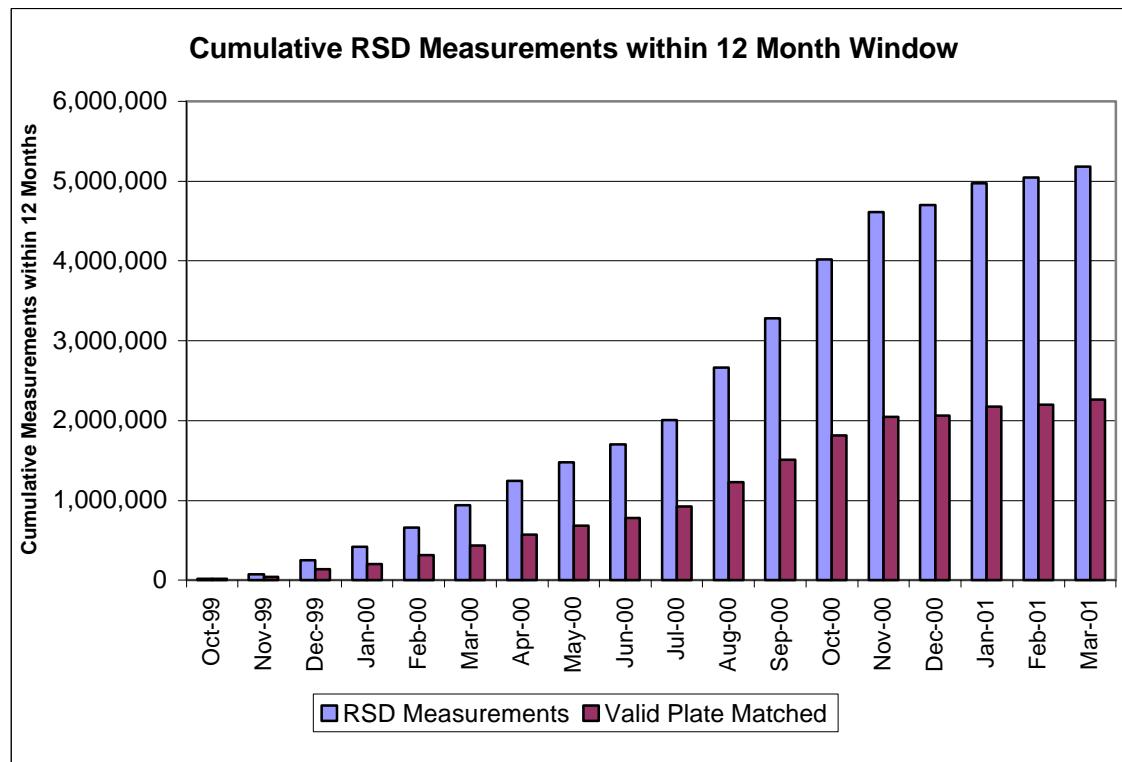
The cumulative number of in-state remote sensing records collected within a twelve-month period is shown by month in Figure III-1. The corresponding number of records with valid HC, CO, CO₂, NOx, speed and acceleration measurements that are successfully matched to Missouri registrations is indicated by the shorter bars. While 5.6 million on-road measurements were made in the most recent twelve months, only 40% (2.2 million records) had complete data successfully matched to Missouri registrations. Reasons for this difference include out-of-state plates, incomplete measurements, obscured plates and an approximately 80% registration plate match rate. License plates are often transferred from one vehicle to another when a vehicle is transferred to a new owner. When vehicle registration records indicate such a change has taken place, remote sensing readings made prior to the plate change are flagged as being no longer valid for RapidScreening.

To adjust for the slower rate of collection in the starting months and the lower than expected match rate, the pace of data collection was accelerated in summer 2000 with an increase in the

number of remote sensing units from six to eight and the addition of extra remote sensing staff and shifts.

According to the EPA Clean Screening Guidance document, remote sensing measurements must be gathered within twelve months of a vehicle's registration renewal date. Records collected more than twelve months previously are not used to make a clean screen determination. Therefore, for example, the last pair of bars in Figure III-1 shows the measurements made from April 1, 2000 through March 31, 2001.

Figure III-1 Cumulative Remote Sensing Measurements



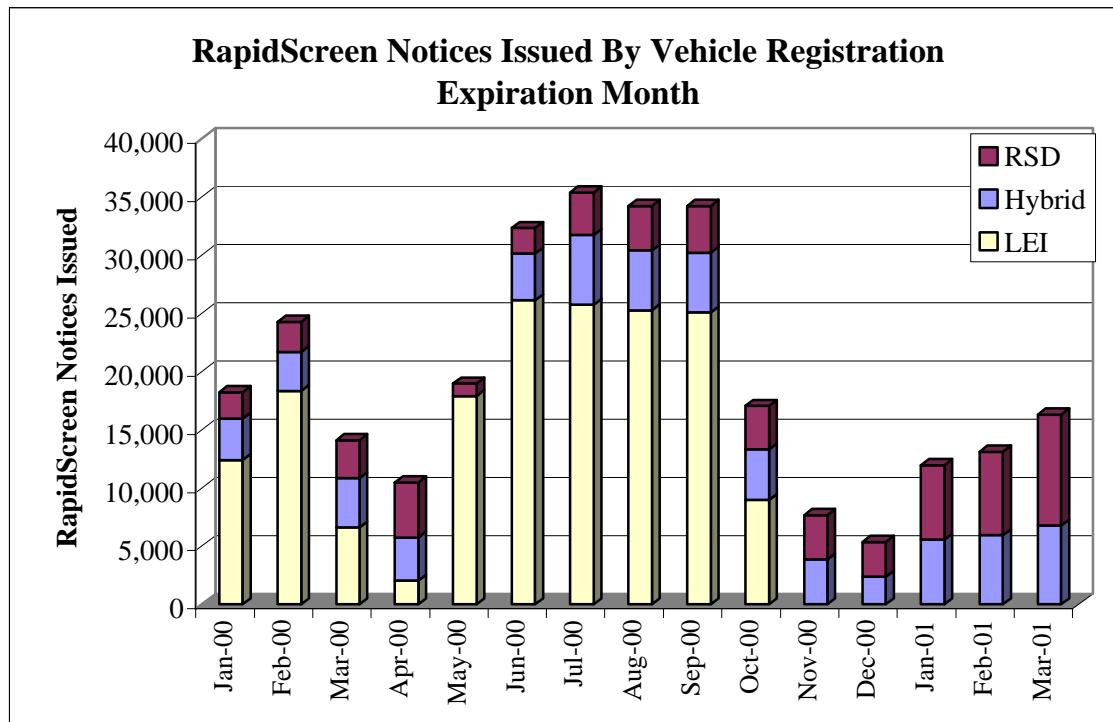
4. Notices Issued and Redeemed

Figure III-2 shows the number of RapidScreen notices issued for vehicles by registration renewal date. Notices are prepared approximately a month and a half prior to the month in which the vehicle is due to renew.

For May 2000 to March 2001 registrations, notices were issued chronologically as one would expect. Since the Gateway Clean Air Program did not commence full operation until April 2000, Enhanced area even model year vehicles due to register in January through April 2000 were granted extensions for emissions inspection until later in 2000. The requirement to test even model year January-April 2000 vehicles in the May-December period meant that the number of vehicles requiring testing at inspection stations had to be carefully controlled. RapidScreen notices for the January to April registrations were issued subsequently at various points through the year. The number of RapidScreen notices issued was increased for peak months to avoid long wait times at the testing stations.

At the start of the program, remote sensing data was only available for a small percentage of the on-road vehicles. The low emitter index was used to a greater extent during the start-up period to obtain the design number of RapidScreen vehicles.

Figure III-2 RapidScreen Notices Issued



When vehicles are sold, scrapped or operated out of the area, motorists often do not notify the motor vehicle registration agency. For this reason, a few RapidScreen notices, which were based solely on the LEI values, were issued for vehicles that were no longer active in the area. This in turn caused negative public reaction to the use of the LEI method as the basis for RapidScreening vehicles. As a result of this public concern, use of the LEI method was discontinued for November 2000 and all subsequent registrations.

Participation in the RapidScreen program is voluntary. A vehicle owner must choose to respond to a RapidScreen notice in order for a vehicle to complete the RapidScreen process. If a vehicle owner chooses not to respond to a RapidScreen notice, their vehicle must be emission tested at a station. Figure III-3 shows the number of vehicles by registration renewal date that completed the emission test requirements because the vehicle owner redeemed a RapidScreen notice.

The numbers of notices issued and redeemed are shown side-by-side in Table III-2. Notices for April 2000 registrants were not issued until late in the year and most redemptions were received after these vehicles had re-registered and their registration renewal date had been updated to 2001. Consequently, many of the April 2000 notice redemptions are counted in the April 2001 number. The percentage of notices redeemed, shown in the right hand column of Table III-2, seems likely to stabilize in the 70%-80% range in 2001.

Figure III-3 RapidScreen Notices Redeemed

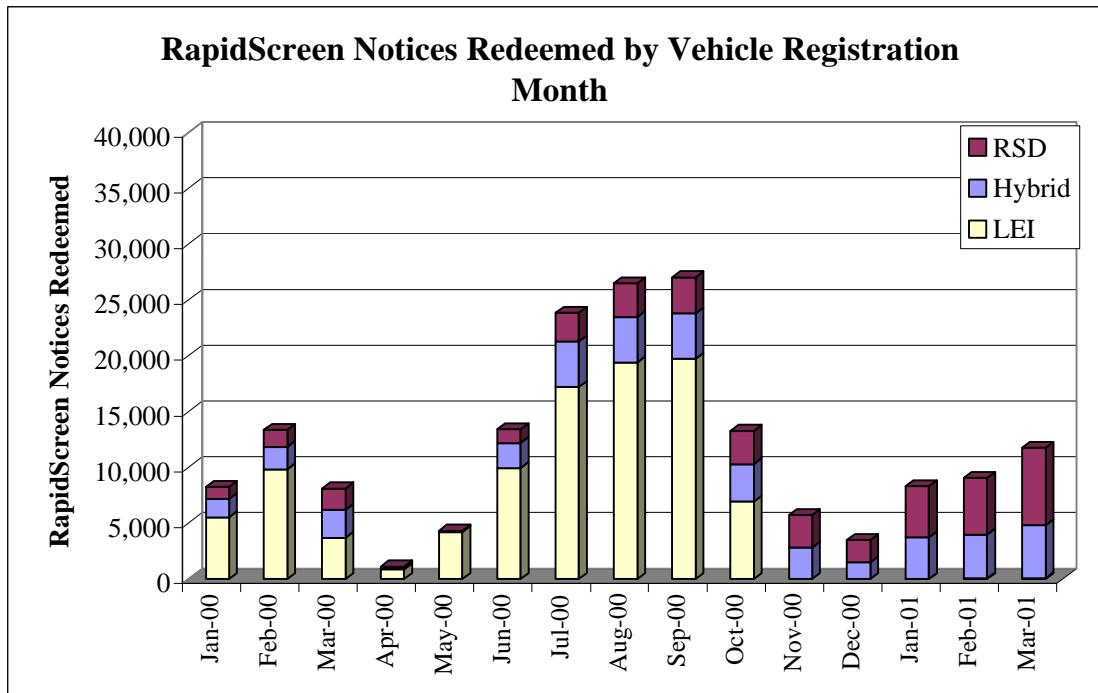


Table III-2 RapidScreen Notices per Registration Month

Reg Month	Notices Issued (VMR)				Notices Redeemed (VTR)				% Returns
	RSD	Hybrid	LEI	Total	RSD	Hybrid	LEI	Total	
Jan-00	2,300	3,535	12,408	18,243	1,042	1,660	5,530	8,232	45%
Feb-00	2,588	3,379	18,337	24,304	1,532	2,009	9,838	13,379	55%
Mar-00	3,266	4,222	6,613	14,101	1,919	2,489	3,706	8,114	58%
Apr-00	4,707	3,736	2,025	10,468	180	69	864	1,113	11%
May-00	1,080	-	17,914	18,994	59	29	4,226	4,314	23%
Jun-00	2,175	4,058	26,102	32,335	1,237	2,245	9,934	13,416	41%
Jul-00	3,657	6,009	25,736	35,402	2,577	4,045	17,232	23,854	67%
Aug-00	3,818	5,150	25,271	34,239	3,036	4,076	19,411	26,523	77%
Sep-00	4,012	5,125	25,096	34,233	3,248	4,076	19,725	27,049	79%
Oct-00	3,730	4,359	8,965	17,054	2,962	3,366	6,936	13,264	78%
Nov-00	3,837	3,852	-	7,689	2,927	2,804	-	5,731	75%
Dec-00	2,993	2,367	-	5,360	2,005	1,487	-	3,492	65%
Jan-01	6,382	5,575	-	11,957	4,584	3,712	9	8,305	69%
Feb-01	7,164	5,940	-	13,104	5,086	3,941	39	9,066	69%
Mar-01	9,564	6,748	-	16,312	6,954	4,733	74	11,761	72%
Apr-01	-	-	-	-	7,529	5,430	-	12,959	-
Total	61,273	64,055	168,467	293,795	46,877	46,171	97,524	190,572	-
% Returns					77%	72%	58%	65%	

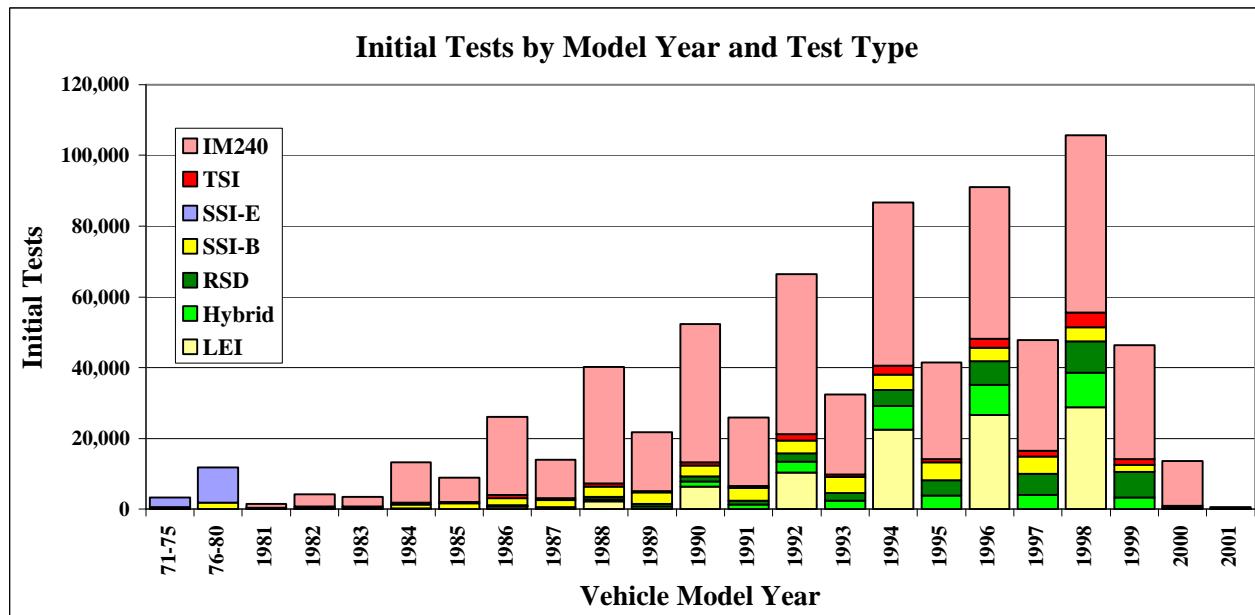
B. Distribution of Vehicles Clean Screened

I. RapidScreen Tests by Model Year

The distribution of initial tests by model year and type of emissions test or RapidScreen method is shown in Figure III-4. In both the Enhanced and Basic I/M areas, station-based testing and the mailing of RapidScreen notices began April 5, 2000. In the Enhanced I/M area, even model year vehicles are scheduled for testing in even years and odd model years in odd years. In the Basic I/M area, all vehicles are tested annually, regardless of model year. Therefore, the testing period being reported here, January 2000 through March 2001, contains a greater proportion of even model year vehicle tests. Since the LEI method was discontinued towards the end of 2000, there are no odd model year vehicles passing RapidScreen by the LEI method.

Figure III-4 describes the frequency of each of the emissions tests conducted by the Gateway Clean Air Program. Three of the seven test types, RSD, Hybrid and LEI, are RapidScreening methods. All vehicles in both enhanced and basic areas are eligible to be RapidScreened. Four of the seven test types, IM240, TSI, SSI-E, SSI-B are station-based test methods. IM240 tests are only performed on 1981 and newer model year vehicles in the Enhanced area. Two-speed idle tests (TSI) are only performed on 1981 and newer vehicles in the Enhanced area that cannot be IM240-tested. Single-speed idle tests are performed in the Enhanced area (SSI-E) on all 1971-1980 model year vehicles and on all vehicles, regardless of model year, in the Basic area (SSI-B).

Figure III-4 Initial Tests by Model Year and Type of Test

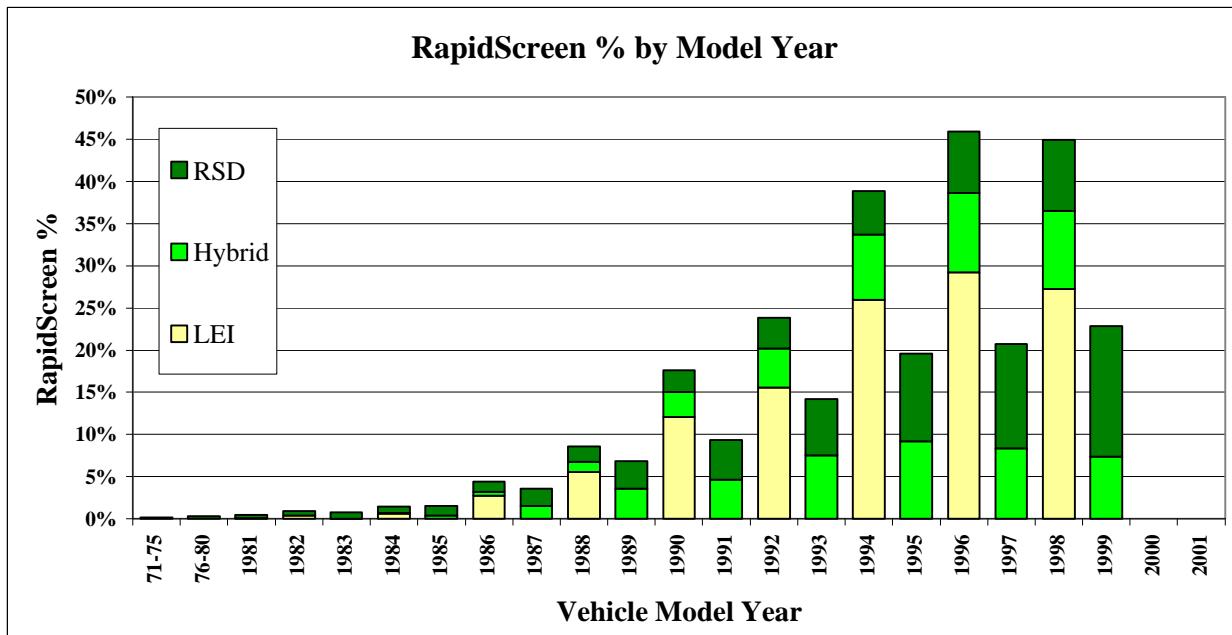


The percentages of each model year that were RapidScreened using each method is shown in Figure III-5. A table showing the distribution of RapidScreened vehicles by vehicle model year, make, and model is provided in Appendix A3.

The proportion of vehicles passing a RapidScreen test is greatest among the newest vehicle models. The newest vehicles have a higher probability of passing the RapidScreen cutpoints

because they tend to be driven more miles each year (See section VII. B.) and are designed to run more cleanly than older vehicles. These factors increase the chance of newer vehicles qualifying for RapidScreen.

Figure III-5 RapidScreen Redemptions by Model Year and Method



2. RapidScreen Tests Per County and ZIP Code

The percentage of vehicles in each county being RapidScreened with the RSD method depends upon a number of factors:

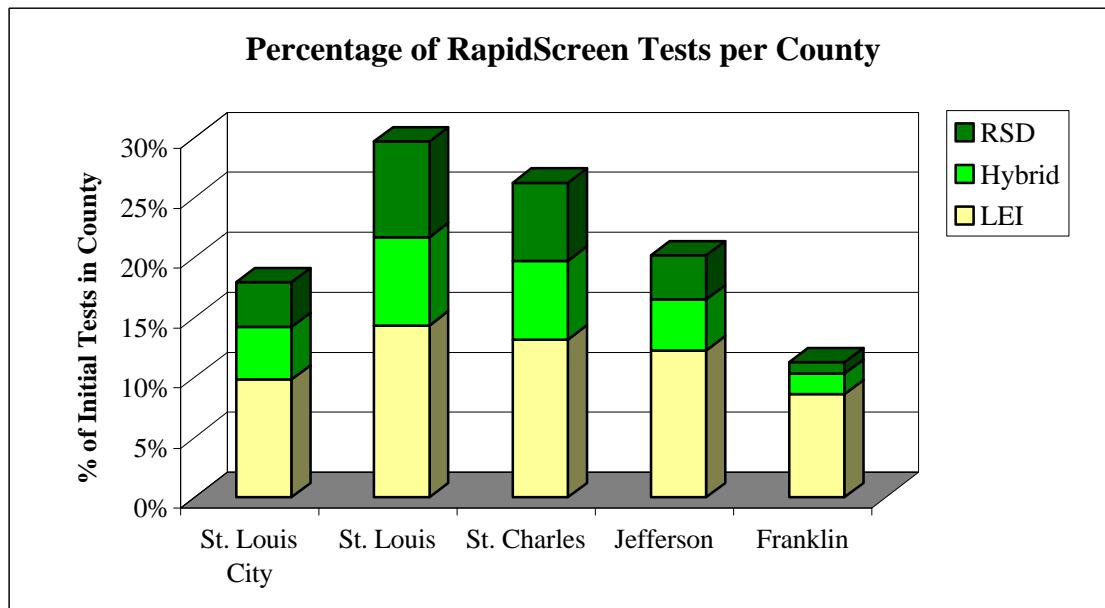
- The age distribution of vehicles in the county
- The population and traffic density in the county
- The availability of remote sensing sites in the county
- The frequency of RSD unit deployment in the county
- The motorist response rate to RapidScreen notices
- The frequency of the emission test requirement (annual or biennial) in the county

Figure III-6 shows the percentage of initial tests completed using RapidScreen by county. The percentage of RapidScreened vehicles shown for Franklin County has been adjusted by a factor of two to account for the biennial RapidScreen certificates vs. the annual basic test. A table showing the percentage of tests that were RapidScreen tests by ZIP code is provided in Appendix A2.

The denser traffic areas tend to have the largest percentage of RapidScreened vehicles. The lower percentages of LEI vehicles for St. Louis City and Franklin County suggest that the vehicle fleet is older in these counties. The lower percentages of LEI vehicles would also partly account for the lower percentage of vehicles RapidScreened by the RSD and Hybrid methods in these counties. Other factors that could account for lower RapidScreen percentages in these two counties include

the difficulty of finding suitable sites in St. Louis City that do not disrupt traffic and the low traffic counts in Franklin County.

Figure III-6 Percentage of Tests that are RapidScreen in Each County



C. Quality Control and Quality Assurance

ESP Missouri subcontracted Remote Sensing Air (RS=A) to provide RSD data management and quality assurance functions for the RapidScreen program. Therefore, RS=A has prepared the majority of this section of the RapidScreen Startup Report.

RapidScreen data management activities include:

- Ensuring that all datasets collected are tracked from collection through inclusion in the full database of records available for matching.
- Ensuring that all valid records have been tag edited.
- Ensuring that all datasets are properly transferred to the full database for matching.
- Archiving all raw data to digital video discs for ESP Missouri and MDNR.

The quality control (QC) and quality assurance (QA) procedures include:

- Checking for the presence of correct RSD unit calibration records.
- Training of tag editors.
- Quality control on tag editors.
- Quality assurance of the tag edit process through a 10% audit sample.

- Quality assurance of the correct matching of vehicle images and RSD measurements to registration records through image verification of a 10% sample of vehicles that are being issued RapidScreen notices.

A complete list of RapidScreen data management, QC and QA activities is provided in Table III-3.

Table III-3 List of QC and QA Tasks and Responsibilities

<u>Prepared by RSA 03-23-01</u>	<u>Responsibilities</u>		
	<u>Frequency</u>	<u>Company</u>	<u>Personnel</u>
Task			
Upload data from Vans (must be done daily)	Daily	ESP	Lead Operator
Verify all files present (must be done daily)	Daily	ESP	Lead Operator
Check data received against expected schedule	Daily	ESP	Lead Operator
Check images for each folder for clearness and position	Daily	ESP	Lead Operator
Check cal gas values in log file against known values	Daily	RSA	Database Manager
Enter RSD Daily Log Sheet Information into SDM check database	Daily	ESP	RSD Technician
Check pot settings against certification values	Daily	ESP	RSD Technician
ESP must also maintain & repair equipment & keep up database on these actions	Daily	ESP	Bench Technician
Create data tracking forms (DTF) and QA sheets	Daily	RSA	Database Manager
Enter DTF information into Data Tracking database	Daily	RSA	Database Manager
Create site statistics	Daily	RSA	Database Manager
Compare hit rate of new data to avg. for site	Daily	RSA	Database Manager
Assign data to tag editors & log in database	Daily	RSA	Tag Edit Manager
Track progress of tag editors	Daily	RSA	Tag Edit Manager
Log in tag edited files	Daily	RSA	Tag Edit Manager
Move completed folders to NEED QA	Daily	RSA	Tag Edit Manager
Give tag edited DTF forms to RSA Data Manager	Daily	RSA	Tag Edit Manager
Train tag editors	As needed	RSA	Tag Edit Manager
Run QC check on tag edited data & provide feedback to TEM	Daily	RSA	Database Manager
QA data	Daily	RSA	QA Auditor
Enter QA results into Data Tracking & QA/QC DB	Daily	RSA	Database Manager/QA Auditor
Create revised text file and send it to To Database folder	Daily	RSA	Database Manager
Move folder from Needs QA to Copy to DVDs	Daily	RSA	Database Manager
Copy corresponding images to RSD Images	Daily	RSA	Database Manager
Copy files to DVDs & create logs for ESP and MDNR	Daily	RSA	Database Manager
Perform RSD Image QA for mailers	Monthly	RSA	Database Manager/QA Auditor
Process audit data and create summaries for SDM performance	Monthly	RSA	Database Manager
Create reports on site statistics	Monthly	RSA	Database Manager
Evaluate the 2% of vehicles withheld from mailers and sent to IM	Monthly	RSA	Database Manager
Perform site audits for each operator once per month & report	Monthly	RSA	Database Manager
Assist with new site selection	As needed	RSA	Database Manager
Prepare reports on QA, site statistics, and data flow	Monthly	RSA	Database Manager
Evaluate cut point choices for Clean Screen & Gross Emitter using data collected	Annually	RSA	Database Manager
Ensure that all tasks are being done efficiently	Daily	RSA	Project Manager
Assist in providing more efficient procedures	As needed	RSA	Project Manager
Assist in report design	As needed	RSA	Project Manager
Assist in modifications of ATP requirements	As needed	RSA	Project Manager

1. Training of Tag Editors

Each tag editor is provided a set of tag editing rules and photographs of various types of license plates. RS≡A gives a short training session covering the rules and best ways to perform the tag editing. Then each tag editor is provided 500 records to tag edit. These 500 records are checked

for errors, and the dataset is reviewed with the tag editor. The trainer explains the types of errors found and provides guidance to the tag editor for avoiding those errors. This process is repeated until the tag editor has fewer than 15 errors (3%). If at any point, a tag editor has an increase in error rate above 20 errors (4%), the dataset is 100% checked, and the tag editor is required to review the types of errors found.

The numbers of trained and experienced van operators and tag editors are presented in Figures III-7 and III-8. From October 1999 through March 31, 2001, 21 van operators, 23 RS≡A tag editors, 4 on-site tag editors, and 9 temporary tag editors were trained. One trainee could not get error rates below 4% on a regular basis. Some of the RS≡A tag editors went on to become QA personnel and data management personnel while others left for other positions. Two van operators became the Lead Operator and RSD Technician.

The majority of the temporary ESP Missouri tag editors were active in February and March 2000 as well as in August and September 2000. The majority of training for both van operators and tag editors was from July through September 2000, during the collection ramp-up period described in section III. A. 3.

Figure III-7 Van Operators Trained and Experienced by Month

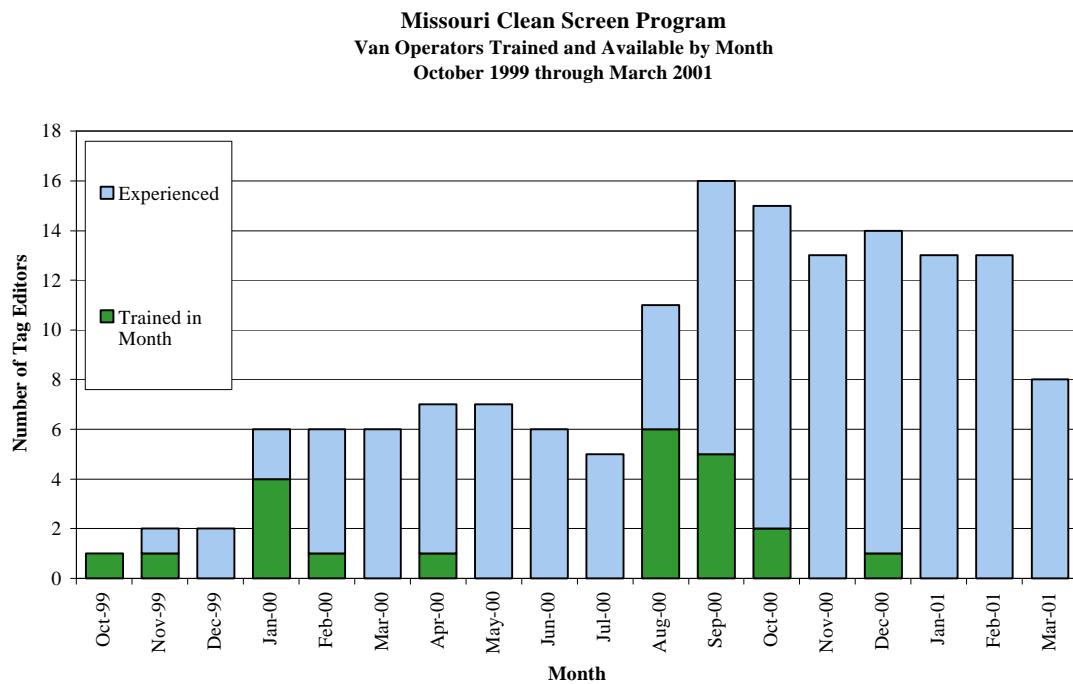
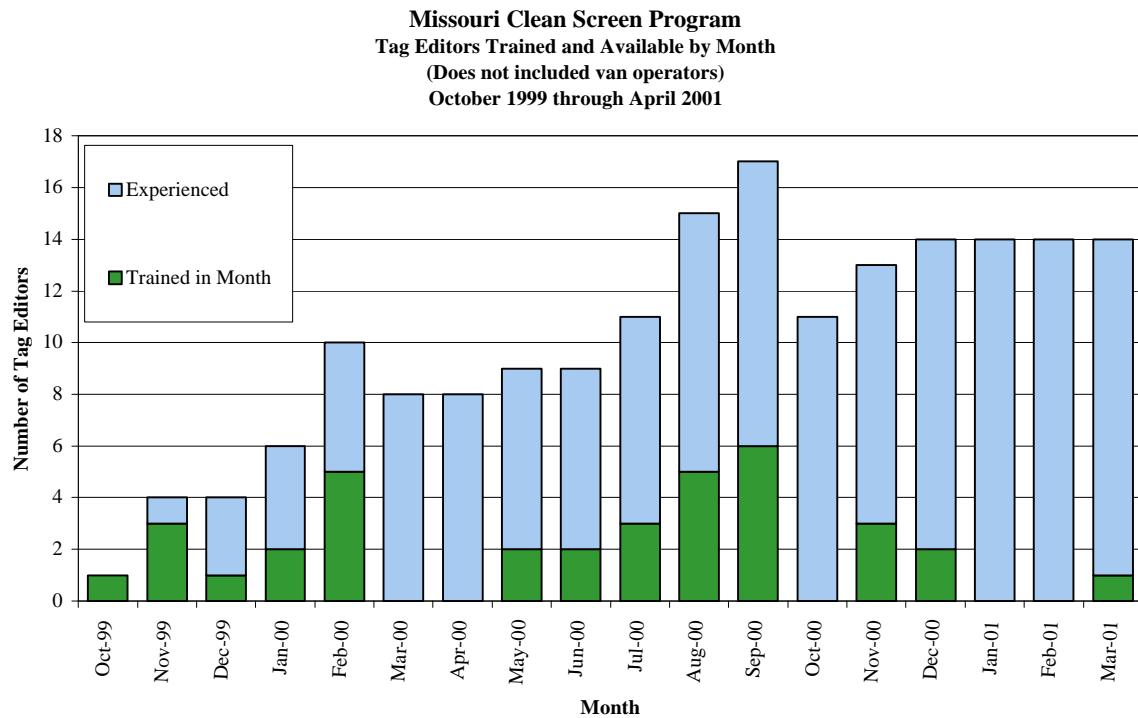


Figure III-8 Tag Editors Trained and Experienced by Month



2. Quality Control on Tag Editors

Quality control of tag editors gives the trainer an understanding of the performance of each tag editor and provides the trainer with the opportunity to give their tag editors additional training as necessary. Each tag editor undergoes 100% QC on all records tag edited until their error rate falls below 3%. After this time, the routine QA on each dataset (See section III. C. 4.) is used to verify the error rates for each tag editor. If the error rate goes above 4%, then the dataset goes through a 100% QC check, the tag editor reviews the errors made, and the trainer gives the tag editor guidance on how to avoid the problems exhibited. Most tag editors stay below the 3% error rate for their period of tag editing (generally below 1%). During QC checking, all errors found are corrected in the dataset to ensure as accurate a database as possible.

An RSD dataset from one RSD unit is typically divided into several parts that are individually assigned to a tag editor. Each part of the RSD dataset is called a tag edit dataset. The number of tag edit datasets and records requiring QC are provided in Table III-4 by month. In some months, no tag edit datasets required 100% QC.

RSD datasets with poor images occasionally caused higher QC error rates; such datasets were more common with new van operators (See Figures III-7 and III-8 and Table III-4). A few tag editors had widely varying error rates.

Table III-4 Monthly Summary of QC on Tag Editors

Collect Month	Actual Records Tag Edited	Average Records per Tag Edit Dataset	Number of Tag Edit Datasets	Number of Records QC Checked	Number		Percent of Datasets Needing QC
					Datasets	of Datasets Needing QC	
2000 01	167,785	1,387	121	7,647	10	8.3%	
2000 02	271,903	1,618	168	1,591	2	1.2%	
2000 03	312,136	1,553	201	4,731	5	2.5%	
2000 04	302,246	1,843	164	6,375	12	7.3%	
2000 05	251,043	1,902	132	16,206	7	5.3%	
2000 06	239,355	1,734	138	10,206	11	8.0%	
2000 07	296,165	1,584	187	23,899	28	15.0%	
2000 08	500,335	1,749	286	31,711	42	14.7%	
2000 09	435,585	1,414	308	30,073	39	12.7%	
2000 10	509,222	1,529	333	0	0	0.0%	
2000 11	420,463	1,605	262	686	2	0.8%	
2000 12	157,891	1,224	129	4,777	2	1.6%	
2001 01	262,758	1,081	243	0	0	0.0%	
2001 02	186,201	1,241	150	0	0	0.0%	
2001 03	325,204	1,694	192	2,000	1	0.5%	
Total	4,638,292		3,014	139,902	161	5.3%	
Average	309,219	1,539	201	9,327	11	5.3%	

3. Quality Control on VDR Datasets

When a tag editor completes a particular tag edit dataset, all of the records are checked for errors using specific queries. In this way, common errors, such as inclusion of improper symbols or spaces, inappropriate number of characters, or inappropriate combinations of data field contents, are found and corrected before the final QA is performed (See section III. C. 4). This QC process ensures that the VDR table contains accurate information. RS≡A tracks the numbers and types of errors so that each tag editor knows the types of errors being made and how best to avoid such errors.

Table III-5 shows the total and average number of these common errors found each month through this QC process. This query review of 100% of the data for the month takes little actual time and is a worthwhile step because, although the average percentage of errors found is small (0.16%), the average number of errors found (496) is greater than the average number of errors found during the QA process (373) (See Table III-6).

Table III-5 Monthly Summary of QC on Tag Edited Datasets

Year	Month	Actual Records Tag Edited	Errors Found	% Errors by Month
2000	Jan	167,785	115	0.07%
2000	Feb	271,903	332	0.12%
2000	Mar	312,136	431	0.14%
2000	Apr	302,246	343	0.11%
2000	May	251,043	218	0.09%
2000	Jun	239,355	291	0.12%
2000	Jul	296,165	887	0.30%
2000	Aug	500,335	1,292	0.26%
2000	Sep	435,585	1,178	0.27%
2000	Oct	509,222	853	0.17%
2000	Nov	420,463	549	0.13%
2000	Dec	157,891	256	0.16%
2001	Jan	262,758	366	0.14%
2001	Feb	186,201	115	0.06%
2001	Mar	325,204	218	0.07%
Total		4,638,292	7,444	0.16%
<i>Average</i>		<i>309,219</i>	<i>496</i>	<i>0.16%</i>

4. Quality Assurance on VDR Datasets

Quality assurance of the datasets provides information on the accuracy of the VDR table used for RapidScreen image and registration matching. Each tag edited dataset has 10% of the records checked. Each dataset is divided into four equal parts. A random number is chosen from the first quarter of data and a range of 10% of that quarter is visually checked. The process is repeated for each subsequent quarter using the same random number added to the first record of each bin. In July 2000, the tag edit program was modified to only allow the tag editing of records with valid HC, CO, NOx, and CO2 measurements. At that point, the QA checks were also performed only on the tag edited records.

If the number of errors exceeds 4% for any tag editor, then the dataset undergoes 100% QC check on the records for the tag editor (See section III. C. 3.). If there is a specific type of error that can be checked, then only those records with that type of error are checked. After a 100% QC check, the dataset again undergoes a 10% QA check using a different set of random records to provide the actual quality of the final data in the VDR table.

Table III-6 provides a summary of the QA results by month. The average QA error rate for the VDR table is 1.16% (~99% accuracy). The actual final quality of the tag edited datasets in the VDR table will be higher than that reported since all errors found during the QA process are corrected.

Van operators in training have a dual impact on the quality of the tag-edited data. First, the quality of the images collected were usually poorer for the new operators, which increased tag edit errors even for experienced tag editors. Second, the new van operators were less experienced in tag editing and made more errors, thereby necessitating more QC. For example, when additional new operators were added in July and December 2000, the average QC and QA

error rates increased slightly and then fell as their skill improved (See Tables III-4, III-5, and III-6).

Tag edit errors create incorrect license plate numbers that may not match any vehicle registered in the Gateway Clean Air Program area. When remote sensing measurement records in the VDR table containing these errors are compared to registrations to obtain vehicle information, these records with plates that do not match any vehicle subject to the program are discarded. Therefore, not all of the 1% of tag editing errors are carried forward to the RapidScreen notice generation process.

Table III-6 Monthly Summary of QA on Tag Edited Datasets

Year	Month	Actual	Number of	Percent of	Percent	
		Records Tag Edited	Records QA Checked	Records QA Checked	Errors Found	Errors by Month
2000	Jan	167,785	20,888	12%	406	1.94%
2000	Feb	271,903	29,573	11%	442	1.49%
2000	Mar	312,136	32,649	10%	481	1.47%
2000	Apr	302,246	30,867	10%	362	1.17%
2000	May	251,043	25,346	10%	238	0.94%
2000	Jun	239,355	24,212	10%	218	0.90%
2000	Jul	296,165	30,713	10%	596	1.94%
2000	Aug	500,335	50,523	10%	827	1.64%
2000	Sep	435,585	45,736	10%	609	1.33%
2000	Oct	509,222	51,353	10%	532	1.04%
2000	Nov	420,463	42,704	10%	306	0.72%
2000	Dec	157,891	21,607	14%	256	1.18%
2001	Jan	262,758	27,877	11%	167	0.60%
2001	Feb	186,201	15,758	8%	56	0.36%
2001	Mar	325,204	31,646	10%	102	0.32%
TOTAL		4,638,292	481,452	10%	5,598	1.16%
<i>Average per month</i>		<i>309,219</i>	<i>32,097</i>	<i>11%</i>	<i>373</i>	<i>1.16%</i>

5. Quality Assurance on VMR Images

Each month, vehicle mailing records (VMRs) are created for vehicles that qualify for RapidScreen and are due to renew their registration. This is the first step in creating and mailing monthly RapidScreen notices. RSD image quality assurance verifies that the license plate images of the two qualifying remote sensing records match each other and match the vehicle identified by the MDOR registration information. This QA process is performed for each monthly set of data in the VMR table that is used to generate the RapidScreen notices. A program written by ESP is used to QA a random 10% of the RapidScreen notices. There are five choices when checking the images:

- P (Pass) – both RSD images are the same and match the registration data for that record.

- R (Fail) – both RSD images match each other but do not match the registration database. This is generally due to a time lag in ownership and the MDOR database, but the vehicle cannot be passed since the vehicle does not match the registration.
- DO (Fail) – both RSD images do not match each other. This may be due to the same plate being used for different vehicles, or a change in ownership of the vehicle/plate between the time of the collection of the image and the data in the MDOR database.
- DTE (Fail) – both RSD images do not match each other. This is due to a tag edit error.
- O (Fail) – other issues. This category has been used only three times, all for images of large trucks, whose tailpipe configuration may have resulted in questionable exhaust measurements. Plates for trucks of this type were no longer tag edited after July 2000.

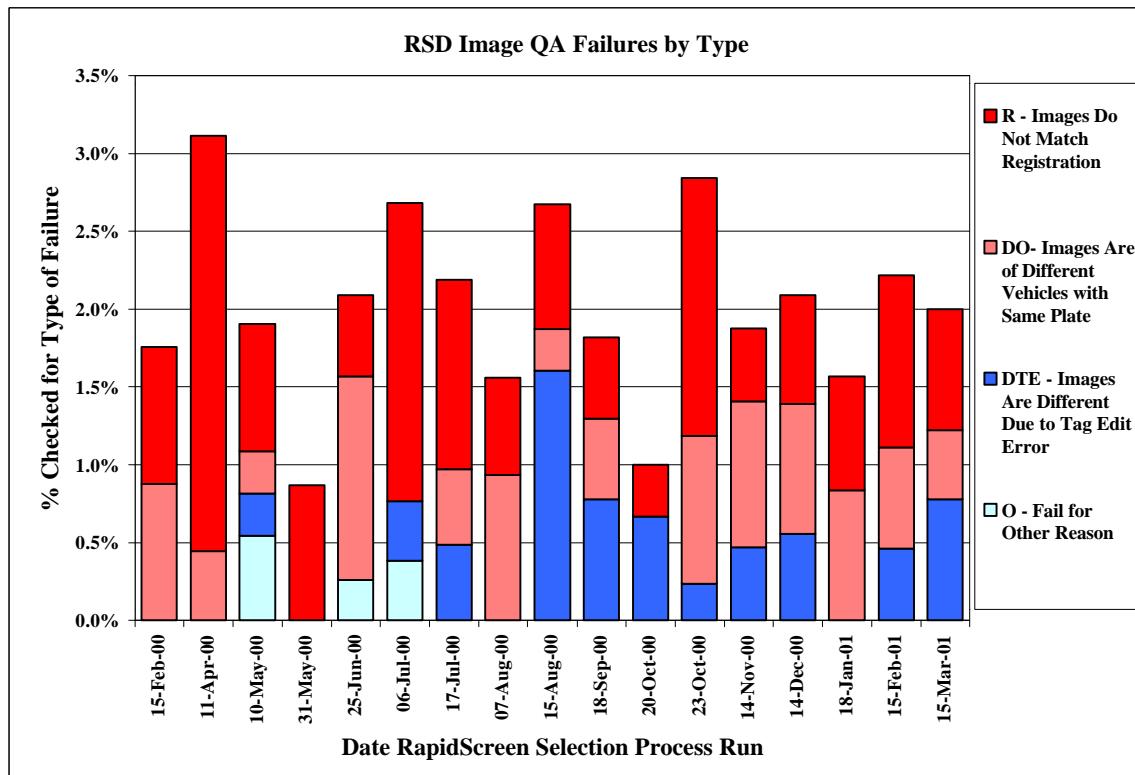
Table III-7 provides a summary of the VMR image matching failure rate for each registration month and overall. The average failure rate of VMR image matching is 2%. The majority of these failures (1.6%) appear to be due to time lags in the MDOR database (R and DO image matching failure types). The average QA rate of failures in the VMR table due to tag edit errors is less than 0.4%, which is lower than the average QA error rate of the tag edited datasets in the VDR table (1.16%) (See Table III-6).

Figure III-9 details the types of image matching failures as a percent of the total number of VMR images checked.

Table III-7 Monthly Summary of QA on VMR Images

Date Process Run	Registration Due	RS Records Matched	RS Records QA'd	RS Image Fail for All Reasons	%RS Images Fail	RS Image Fail Due to TE Error	% RS Image Fail Due to TE Error
15-Feb-00	2000-May	505	114	2	1.8%	0	0.0%
11-Apr-00	2000-Jun	2,360	225	7	3.1%	0	0.0%
10-May-00	2000-Jul	3,740	368	7	1.9%	1	0.3%
31-May-00	2000-Jan	2,350	231	2	0.9%	0	0.0%
25-Jun-00	2000-Aug	3,906	383	8	2.1%	0	0.0%
06-Jul-00	2000-Feb	2,651	261	7	2.7%	1	0.4%
17-Jul-00	2000-Sep	4,105	411	9	2.2%	1	0.2%
07-Aug-00	2000-Mar	3,339	321	5	1.6%	0	0.0%
15-Aug-00	2000-Oct	3,818	374	10	2.7%	3	0.8%
18-Sep-00	2000-Nov	3,924	385	7	1.8%	2	0.5%
20-Oct-00	2000-Dec	1,964	300	3	1.0%	2	0.7%
23-Oct-00	2000-Apr	4,305	422	12	2.8%	1	0.2%
14-Nov-00	2001-Jan	6,527	640	13	2.0%	3	0.5%
14-Dec-00	2001-Feb	7,327	718	15	2.1%	3	0.4%
18-Jan-01	2001-Mar	9,775	958	15	1.6%	0	0.0%
15-Feb-01	2001-Apr	11,047	1,083	24	2.2%	5	0.5%
15-Mar-01	2001-May	9,182	900	18	2.0%	7	0.8%
TOTAL		80,825	8,094	164	2.0%	29	0.36%
<i>Average per month</i>		<i>4,754</i>	<i>476</i>	<i>10</i>	<i>2.0%</i>	<i>2</i>	<i>0.36%</i>

Figure III-9 VMR Image Matching Failure Types



IV. RapidScreen Program Emissions Performance

A. RapidScreen Audit Sample

A random sample of two percent of vehicles meeting RapidScreen criteria are not mailed notices. Instead of being RapidScreened, these vehicles are brought to a test station to obtain the station-based emission inspection. This random sample of vehicles is used to evaluate the effectiveness of the RapidScreen program.

The number of RapidScreen tests and audit vehicle tests is shown in Table IV-1.

Table IV-1 RapidScreen Audit Tests

Type	Tests	Audits	%
RSD	39,272	775	2.0%
Hybrid	41,292	850	2.1%
LEI	97,524	2,462	2.5%
Total	178,088	4,087	2.3%

Audit vehicles are selected by picking the first two out of each hundred vehicles in the VMR table. The actual percentage of audit vehicles is higher than 2% because not all owners of the remaining ninety-eight out of each hundred eligible vehicles respond to their RapidScreen notices.

B. RapidScreen Program Effectiveness

The reporting requirement to make a comparison of the remote sensing records, vehicle profile or model year compared with the actual emissions testing records of the random sample has been interpreted in this RapidScreen Startup Report as an evaluation of the emissions reductions that were obtained by station testing of the audit sample. The effectiveness of the RapidScreen program is then estimated by projecting the result for the random audit sample to all vehicles that were RapidScreened.

I. Pass / Fail Statistics

The results of the emissions inspections of the RapidScreen audit vehicles are shown in Table IV-2. The table shows the number of audit vehicles receiving each type of tailpipe test. The Gateway Clean Air Program uses four test types at the test stations. These test types were described in section III. B. 1. and are abbreviated in Table IV-2 as follows:

- E – Enhanced area biennial IM240
- 2 – Enhanced area biennial Two-Speed Idle
- 1 – Enhanced area biennial Single-Speed Idle
- B – Basic area annual Single-Speed Idle

The test results of the audit sample are grouped by the RapidScreen method used to select the vehicle. The overall test result includes the tailpipe test and a gas cap pressure test. In aggregate, 0.8% of the 4,087 audit vehicles failed their tailpipe emissions inspection, and 1.3% of the audit vehicles failed their gas cap pressure test.

Of the 309 audit vehicles obtaining an idle test (7.6% of the audit sample), none failed an idle tailpipe test. The results in Appendix B4 show that the average tailpipe emissions of the 32 audit vehicles that failed the IM240 test (0.85% of the audit sample) are considerably lower than those of the average vehicle failing the IM240 test.

Table IV-2 RapidScreen Audit Test Pass / Fail Statistics

Type	Test Type	Vehicles	Overall Pass	Overall Fail	Tailpipe Pass	Tailpipe Fail	Ser Status
RSD	E	731	723	8	729	2	2
	2	38	37	1	38	-	2
	B	6	5	1	6	-	2
Total		775	765	10	773	2	
			98.7%	1.3%	99.7%	0.3%	
Hybrid	E	807	790	17	802	5	13
	2	32	30	2	32	-	13
	B	11	11	-	11	-	13
Total		850	831	19	845	5	
			97.8%	2.2%	99.4%	0.6%	
LEI	E	2,240	2,187	53	2,215	25	4
	2	141	140	1	141	-	4
	B	81	79	2	81	-	4
Total		2,462	2,406	56	2,437	25	
			97.7%	2.3%	99.0%	1.0%	
All	E	3,778	3,700	78	3,746	32	
	2	211	207	4	211	-	
	B	98	95	3	98	-	
Total		4,087	4,002	85	4,055	32	
			97.9%	2.1%	99.2%	0.8%	

2. Tailpipe Emissions

In order to evaluate the Gateway Clean Air Program emission reductions and the impact of the RapidScreen component, vehicle test results were sorted by VIN, test date and time. Vehicles were then further classified based on their first and last test result during the period. Interim results are ignored. In the list below, the first and last results are indicated in parenthesis, where P is pass, F is fail, W is waiver and null indicates that there was only a single test result for a particular vehicle. The expected combinations that apply to the vast majority of vehicles are underlined.

- P – Passed initial test (P/null, P/P, P/F, P/W)

- R – Failed and successfully repaired (F/P)
- U – Failed unresolved (F/null, F/F)
- W – Failed and wavered (F/W)

The difference between the initial and final tests is used to determine the percentage of tailpipe emissions reduction of each groupⁱ. For vehicles with only one test, the final result is the same as the initial result.

Adjustment of Fast-Pass Results

To allow for comparison of emissions of vehicles tested over different durations of the IM240 test cycle, the emission results for vehicles that fast-pass the IM240 inspection must be extrapolated. During the IM240 test, the highest gram per mile values occur at second 30 and decrease as the test continues. Gram per mile emissions are highest at the beginning of the test for two reasons. First, some vehicles may not have been properly preconditioned prior to testing, so that their engines and catalytic converters are not fully warmed up, resulting in higher emissions at the start of the test. The emissions of these vehicles decrease once the engine and converter are hot. Second, the first part of the IM240 test simulates urban driving, while the second part simulates highway driving. The mass of tailpipe emissions per mile are higher over the first part of the IM240 cycle.

Several methods have been developed for estimating full test values from fast-pass IM240 test results. The Lawrence Berkeley Livermore Laboratory (LBNL) method developed by Tom Wenzel⁵ has been used here. The LBNL method is based on a sample of second-by-second emissions of 4,000 vehicles given the full IM240 in Arizona in 1992. The grams per mile (g/mi) emissions were calculated for each vehicle for each second of the test, by dividing the cumulative grams of emissions over the cumulative distance driven at each second of the test. The g/mi emissions for each second were then averaged over the entire sample. The ratio is calculated of the emissions at each second to the emissions for the full IM240, for each pollutant for each vehicle. The adjustment factors are as high as three for vehicles passed immediately after 30 seconds. Each of the adjustment factor curves reaches unity at second 240. The adjustments are greater for HC and CO emissions than for NOx emissions. The simplicity of the LBNL method allows it to be applied to stored IM240 test results.

Vehicles with Waivers

Just over 7,000 vehicles received waivers between April 1, 2000, and March 31, 2001. The inspection records for the waiver transaction do not contain tailpipe emission test results. The final emissions data used for these vehicles are, therefore, the results from the last tailpipe emissions inspection preceding the waiver. The reductions shown for these vehicles may not always reflect the final repairs made to the vehicle after it is wavered and may therefore underestimate the Gateway Clean Air Program emission reductions.

ⁱ Approximately 0.7% of vehicles were tested using a different tailpipe procedure on their first and last test and were omitted from the analysis because a direct measurement of the change in emissions was not available. Among the RapidScreen audit vehicles, 14 vehicles fell into this category. An additional 7 were omitted that had an initial station test prior to qualifying as a RapidScreen audit vehicle. Therefore, 4,066 of the 4,087 audit vehicles (99.5%) are included in the first-last test analysis out of the total 4,087.

First and Final Emissions Results

When vehicles fail their initial inspection, they must obtain a repair and return for re-inspection. This process is normally completed in 30 days, but can take longer. To avoid overstating the number of vehicles that have not completed the repair process, the initial and final matching process selects initial tests conducted before March 1, 2001, and final tests conducted before April 1, 2001. This allows 30 days for vehicles to have completed their test and repair cycle, which should be the majority of those that will complete the cycle.

A number of vehicles do not complete the repair-reinspection process. In most cases, these vehicles are either scrapped or removed from the nonattainment area, which does reduce emissions. Surveys in Arizona⁶ and Colorado⁷ have found that some vehicles continue to operate in the area in violation of the program rules, either with expired license plates or with stolen license plates or license plate stickers. In this report, it is assumed that two-thirds of these unresolved vehicles leave the area and one third continue to operate.

Table IV-3 contains an example of the initial and final tailpipe results for 1981 to 1984 passenger vehicles inspected using the IM240 test. The table shows the average initial and average final emissions for each group of vehicles together with the percentage reduction.

For example, of the 615 1981 model year passenger vehicles tested using the IM240 transient test, 15.4% of vehicles initially failed inspection and were repaired (Pass) with over a 70% reduction in HC and CO and a 14% reduction in NOx. Another 11.9% of vehicles failed their initial inspection and had not successfully passed a retest by March 31, 2001 (Unresolved). Reductions from these vehicles are estimated to be approximately 67% for HC, CO and NOx, because two thirds are assumed to have left the area. Finally, 9.9% of vehicles were waived (Waiver), and the measured reductions prior to the waiver were 14% HC, 9% CO and 1% NOx. In aggregate, including vehicles that passed their initial inspection, emission reductions for 1981 passenger vehicles were 40.3% for HC, 40.7% for CO and 11.9% for NOx.

Complete tables by model year and vehicle type are provided in Appendix B for vehicles tested using the IM240, the Enhanced and Basic area idle test procedures. Tables are also provided for the RapidScreen audit sample vehicles. The aggregate results from these tables (See Appendix B4) are used to estimate the impact of the RapidScreen program.

Audit Sample Reductions and Projected Impact

Table IV-4 shows the aggregate first and final results for the audit sample and for all the vehicles that were tested in stations. The emissions reductions from the audit sample are used to project the reductions that could have been achieved if the vehicles that were RapidScreened had instead been inspected at the stations. This amount is then compared to the total emission reductions from vehicles tested at stations to determine the impact of the RapidScreen program and the percentage of emissions reductions retained.

For vehicles subject to the IM240 test, the RapidScreen program retained 95.5% of HC reductions, 96.7% of CO reductions and 90.6% of NOx reductions. These reductions assume all vehicles are driven the same number of miles each year. Mileage adjusted emission reductions are calculated in section VII. C.

For vehicles subject to either the Enhanced or Basic area idle tests, the RapidScreen program had no material effect on the potential tailpipe emission reductions from these vehicles. In other words, the RapidScreen program retained nearly 100% of the HC and CO reductions from these vehicles.

Table IV-3 Transient Test Emission Reductions for 1981-1984 Passenger Vehicles

Missouri Transient Test Emissions Reductions

Unresolved fails remaining in area					33%			Reduction %					
Model Year/Type	First Result	Last Result	Vehicles	Fail%	Initial HC	Initial CO	Initial NOX	Final HC	Final CO	Final NOX	HC	CO	NOX
1981	Pass	-	386		0.79	12.15	2.11	0.79	12.15	2.11	0.0%	0.0%	0.0%
	P Fail	Pass	95	15.4%	3.05	57.64	2.42	0.90	13.44	2.08	70.5%	76.7%	13.8%
	P Fail	Unresolv.	73	11.9%	6.39	104.62	2.58	1.91	34.20	0.83	70.1%	67.3%	68.0%
	P Fail	Waiver	61	9.9%	6.50	107.60	2.01	5.57	98.10	1.99	14.2%	8.8%	1.3%
Total	Fail%		615	37.2%	2.37	39.62	2.20	1.42	23.49	1.94	40.3%	40.7%	11.9%
1982	Pass	-	1,642		0.83	11.48	2.36	0.83	11.48	2.36	0.0%	0.0%	0.0%
	P Fail	Pass	297	13.0%	3.06	51.25	2.74	0.95	13.43	2.33	68.9%	73.8%	14.7%
	P Fail	Unresolv.	139	6.1%	6.23	97.37	2.37	2.05	32.03	0.78	67.1%	67.1%	67.0%
	P Fail	Waiver	210	9.2%	5.04	86.56	2.62	4.42	77.81	2.64	12.3%	10.1%	-0.6%
Total	Fail%		2,288	28.2%	1.83	28.75	2.43	1.25	19.07	2.29	31.9%	33.7%	6.0%
1983	Pass	-	1,010		0.84	10.01	2.42	0.84	10.01	2.42	0.0%	0.0%	0.0%
	P Fail	Pass	159	11.4%	2.74	45.61	2.22	0.79	9.52	2.01	71.2%	79.1%	9.4%
	P Fail	Unresolv.	127	9.1%	5.35	97.69	2.13	1.73	32.56	0.68	67.7%	66.7%	68.4%
	P Fail	Waiver	101	7.2%	5.40	91.42	2.34	4.81	82.67	2.13	10.9%	9.6%	8.8%
Total	Fail%		1,397	27.7%	1.79	27.92	2.37	1.20	17.26	2.20	33.1%	38.2%	7.2%
1984	Pass	-	5,999		0.80	9.11	2.36	0.80	9.11	2.36	0.0%	0.0%	0.0%
	P Fail	Pass	867	11.2%	2.71	46.44	2.57	0.89	10.26	2.32	67.2%	77.9%	9.8%
	P Fail	Unresolv.	394	5.1%	5.40	84.81	2.54	1.77	28.21	0.83	67.3%	66.7%	67.4%
	P Fail	Waiver	501	6.5%	4.67	86.17	2.29	4.23	82.74	2.22	9.5%	4.0%	3.2%
Total	Fail%		7,761	22.7%	1.49	22.09	2.38	1.08	14.96	2.26	27.9%	32.3%	5.0%

Table IV-4 RapidScreen Emissions Impact

	IM240 Tailpipe Emissions			Enhanced Idle Tailpipe			Basic Idle Tailpipe			
	Vehicles	HC g/mi	CO g/mi	NOx g/mi	Vehicles	HC ppm	CO %	Vehicles	HC ppm	CO %
Audit Sample	3,765				203			98		
Average Initial		0.276	3.12	0.923		40.759	0.110		32.490	0.075
Average Final		0.263	2.98	0.915		40.837	0.110		31.337	0.070
Emissions reduction		0.014	0.14	0.009		-0.079	0.000		1.153	0.006
RapidScreens	166,502				8,081			3,505		
Potential Reductions		2,271	22,521	1,427		-637	-1.6		4,041.28	19.31
Station Vehicles	411,022				29,920			48,224		
Average Initial		0.638	7.59	1.382		194.98	0.899		101.40	0.391
Average Final		0.521	5.97	1.349		141.23	0.727		74.52	0.257
Emissions reduction		0.117	1.62	0.034		53.74	0.172		26.88	0.134
In station reductions		48,200	664,663	13,784		1,608,037	5,155		1,296,209	6,480
Combined RS & Stn	577,524	50,472	687,184	15,211	38,001	1,607,400	5,153	51,729	1,300,251	6,499
RapidScreen Impact		4.5%	3.3%	9.4%		0.0%	0.0%		0.3%	0.3%
Retained Reductions		95.5%	96.7%	90.6%	100.0%	100.0%	100.0%	100.0%	99.7%	99.7%

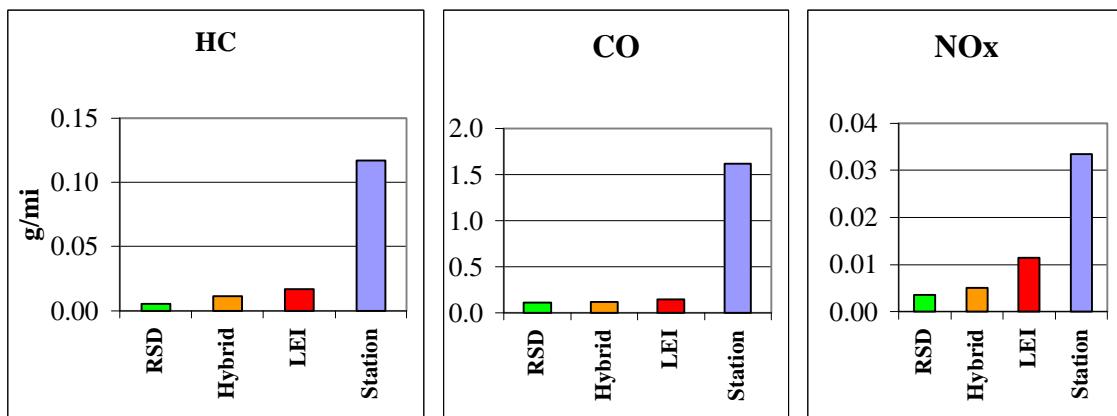
The average per vehicle emission reductions for audit vehicles receiving an IM240 test and other vehicles tested at stations are compared by RapidScreening method in Figure IV-1. Note that the average reductions from the RapidScreen audit vehicles are much smaller than the average reductions from the vehicles that are not RapidScreened and instead tested at an inspection station. These charts illustrate that, even though some of the RapidScreened vehicles failed a station test, RapidScreened vehicles have smaller amounts of repairable emissions than do non-RapidScreened vehicles.

Among the RapidScreen methods used, the RSD method selected vehicles with the highest likelihood of passing the station-based tailpipe test. Therefore, the exemption of vehicles using this method retained the greatest air quality benefit. The results in Figure IV-1 are slightly unfair to the LEI method for two reasons:

- After vehicles passing two RSD measurements were selected, vehicles were next selected using the Hybrid method. The LEI method then had to select vehicles from the residual fleet. Assuming the RSD and Hybrid processes selected the majority of the cleanest vehicles, the LEI process then had to select from the dirtier fleet of vehicles that remained.
- Startup issues, including an initially low percentage of responses to RapidScreen notices and the need to test Enhanced area even model year January through April 2000 vehicles in the May to December 2000 testing period, caused the fraction of vehicles selected using the LEI method to run well over 50% of the available vehicle registration renewals during the summer of 2000 (See Figures III-2 and III-3).

Since the LEI method was discontinued towards the end of 2000, the small air quality impact of RapidScreening described in this section of the report should be smaller in 2001 than it was during the startup period.

Figure IV-1 Average Per Vehicle IM240 Emission Reductions

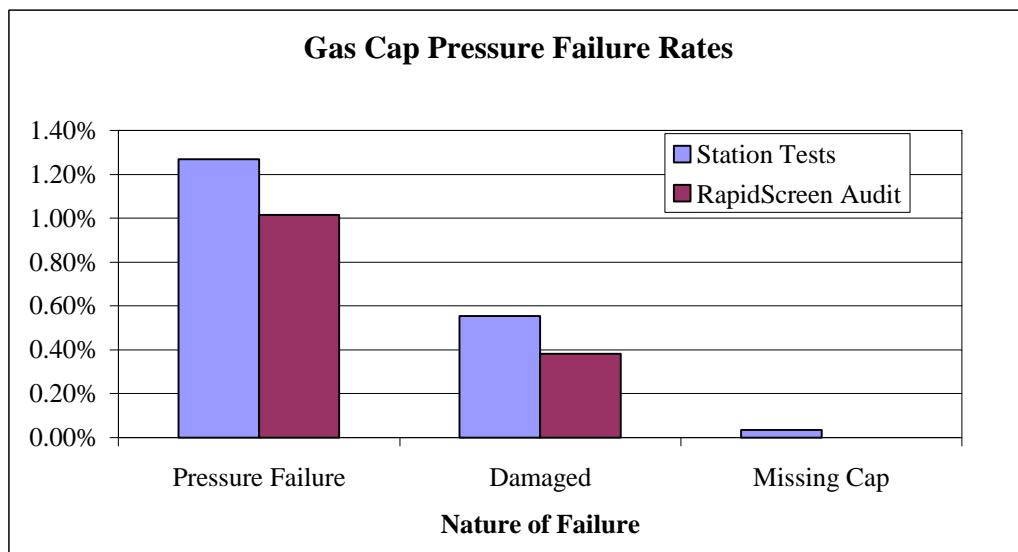


C. Evaporative Emissions

The evaporative emissions test used in the Gateway Clean Air Program is a gas cap pressure test. Leaking gas caps allow evaporated gasoline (HC) to escape from vehicle gas tanks into the atmosphere. The impact of the RapidScreen program is only evaluated in this report in terms of the failure rate, not in terms of repairable gas cap emissions reductionsⁱ.

Figure IV-2 compares the average gas cap failure rate of the RapidScreen audit sample vehicles to the average failure rate of the non-RapidScreened vehicles tested at stations. The failure rate of vehicles RapidScreened is lower than the failure rate of vehicles that received a station-based test, but the difference between the two groups of vehicles is not as great as it was for tailpipe emissions (See Figure IV-1). This result is expected because remote sensing is directed towards measuring tailpipe emissions. An evaporative leak would have to be quite large to be detected by RSD units. There were no vehicles with missing gas caps found among the RapidScreen audit sample.

Figure IV-2 Average Gas Cap Pressure Failure Rates



Using the fail rates identified in the audit sample, Table IV-5 shows the projected gas cap failures that would have been found in the vehicles that were RapidScreenedⁱⁱ. These projected gas cap failures are added to the actual gas cap failures identified in initial inspections at the test stations to provide the total possible gas cap failure rate for the program. RapidScreen vehicles account for 20% of the total possible gas cap failures. Therefore, 80% of evaporative HC emission reductions were retained.

ⁱ Although the gas cap leak rates are measured in the Gateway Clean Air Program, it is not clear that leak rates are directly related to the amount of evaporative HC emissions released from the gas tank. A small pressure leak may have the same effect as a large pressure leak, as long as it is sufficient to release internal gas tank pressure over a period of an hour or so.

ⁱⁱ Only 1981 and newer model year vehicles are gas cap tested. Therefore, fewer vehicles are given a gas cap test (479,249) than are given a tailpipe test (489,166).

Table IV-5 RapidScreen Impact on Evaporative HC Emissions

	Initial Tests	Pressure Failure	Missing Damaged	Missing Cap	Total
RapidScreen Audit	4,087	0.95%	0.34%	0.00%	1.30%
Projected RapidScreen	178,050	1,699	610	-	2,309
Station GC Tests	479,249	6,318	2,628	180	9,126
Total Program	657,299	8,017	3,238	180	11,435
RapidScreen Impact	27%	21%	19%	0%	20%
Retained Reductions		79%	81%	100%	80%

V. On-Road Testing Results

The remote sensing measurements collected during the startup period have been used to plot charts of the on-road vehicle emissions of vehicles registered to the Basic and Enhanced areas. For fleet evaluation and high emitter identification, it is useful to use remote sensing measurements that are within the range of engine operating conditions over which emissions are intended to be controlled. As noted in section III. A. 1., only the RSD measurements of vehicles operating within the vehicle specific power range of 5 to 25 kW/t have been used for the analysis in section V.

A. Basic and Enhanced Area On-Road Emissions

Figures V-1 through V-3 show the average measured emissions by model year of vehicles registered in the Basic area and Enhanced areas. The on-road measurements indicate that, for the most part, vehicles in the Basic area have slightly higher emissions for all three pollutants than those in the Enhanced area. Prior to 2000, Basic area vehicles were not subject to any emissions test. Beginning in April 2000, Basic area vehicles are now being tested using a less stringent test.

Figure V-1 RSD HC Emissions by Model Year

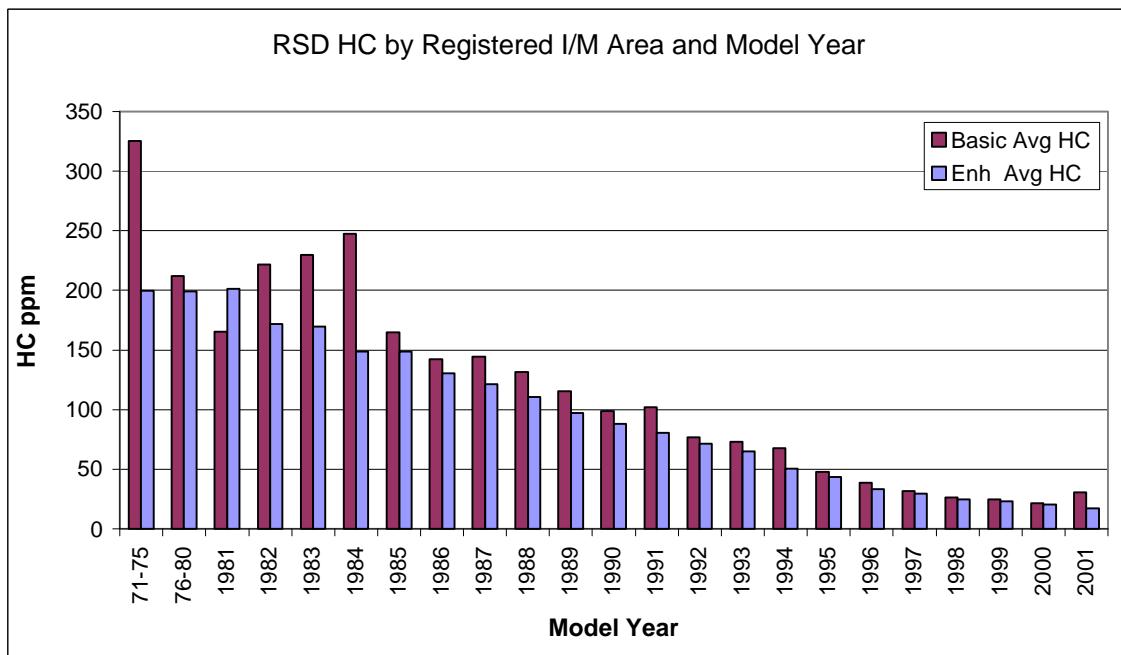


Figure V-2 RSD CO Emissions by Model Year

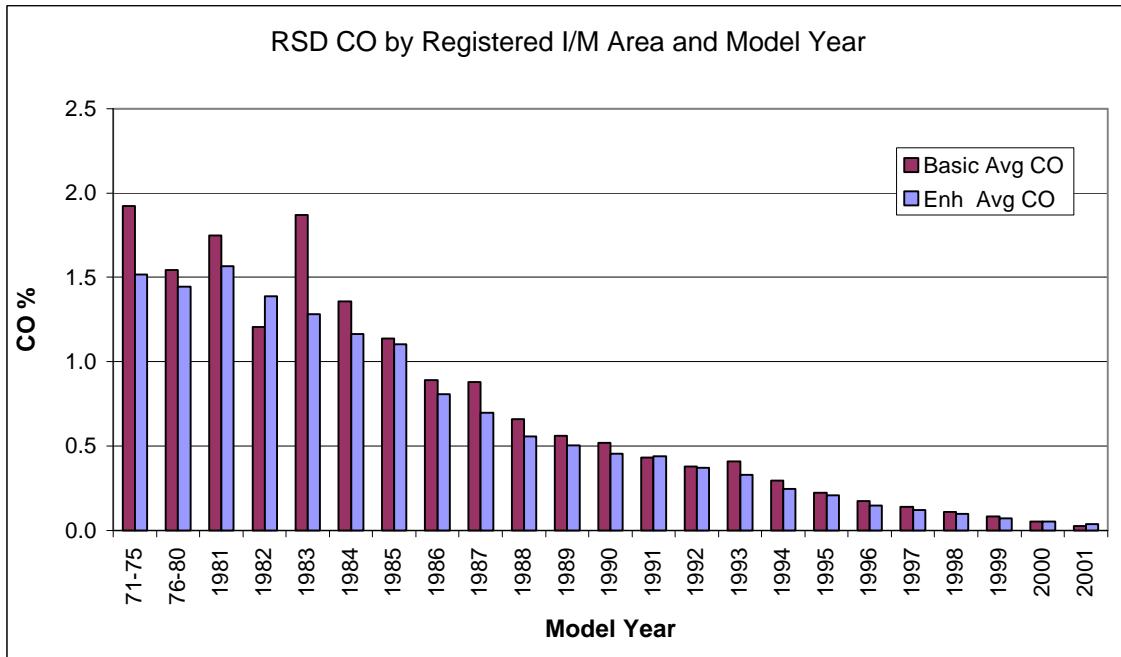
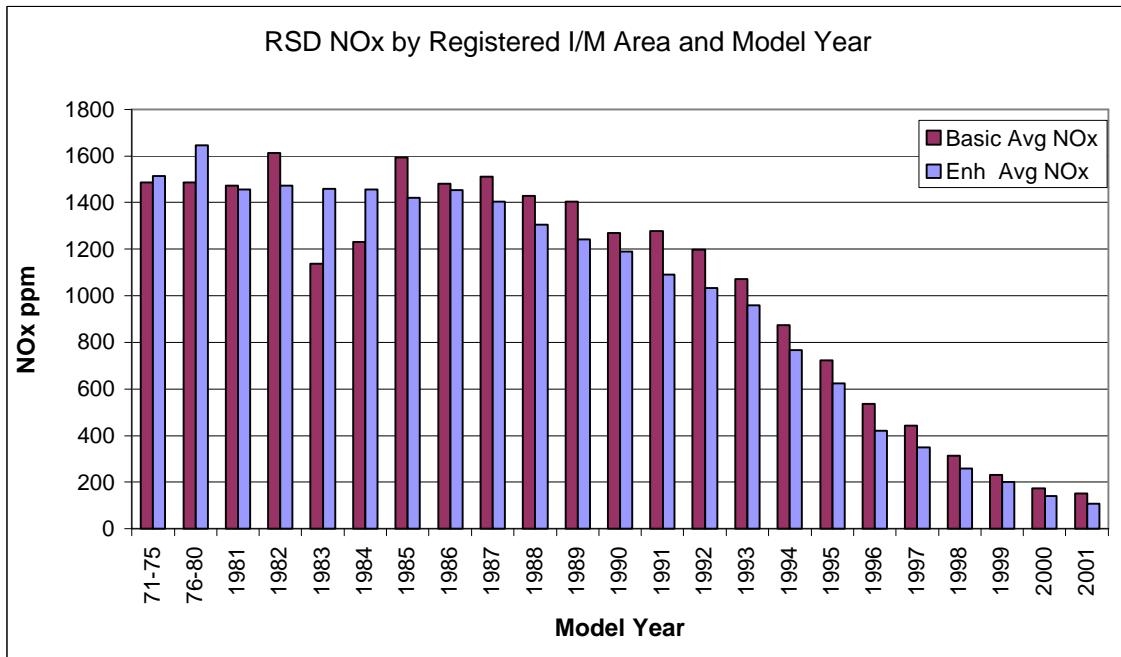


Figure V-3 RSD NOx Emissions by Model Year



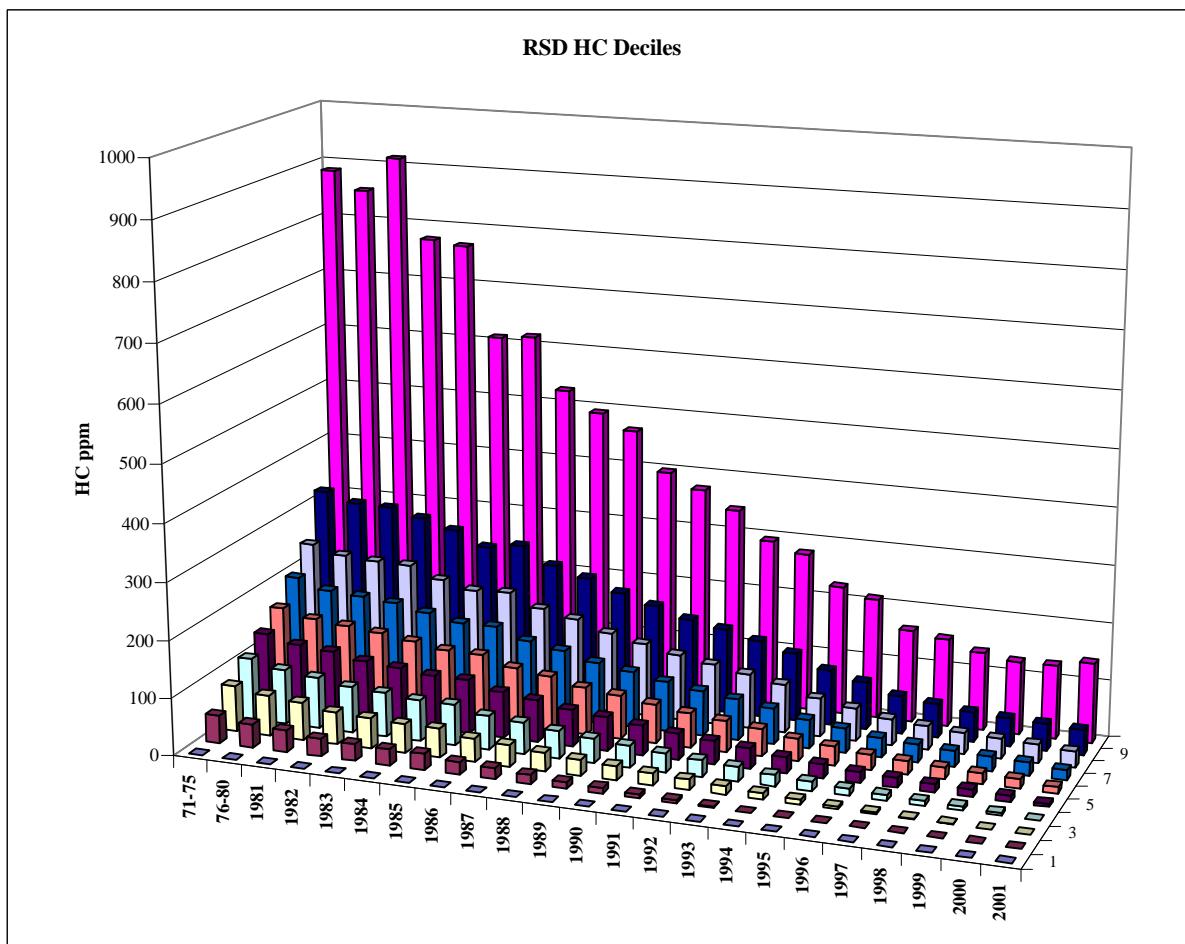
B. On-Road Emission Deciles by Model Year

Figures V-4 through V-6 illustrate the emissions distribution within each model year. Remote sensing measurements falling within the VSP range of 5-25kW/t were averaged to obtain a single

result per vehicle. For each pollutant, vehicles were ranked and divided into ten groups per model year with each decile containing 10% of the vehicles. The vertical bars show the average emissions of each decile.

These three figures illustrate that there are low emitting and high emitting vehicles in all model years, but the proportion of low emitting vehicles is much greater among newer vehicles. The level of emissions among the highest emitting decile of vehicles in each model year is much higher for the older vehicles.

Figure V-4 Enhanced Area Vehicle HC Deciles by Model Year



The shape of these three charts suggests that the HC and CO emissions have been maintained at lower levels as a result of the basic I/M program that was in place in the St. Louis area (except Franklin County) prior to 2000. The prior basic I/M program tested and failed vehicles for HC and CO, but not for NOx. The shape of these three charts could also suggest that newer vehicle technology has been more successful in controlling HC and CO than in controlling NOx.

NOx emissions appear to be much more evenly distributed throughout the fleet. It is unclear whether the increase in measured NOx emissions from newer to older model years is purely related to vehicle age or is a mixture of improved technology and age.

Figure V-5 Enhanced Area Vehicle CO Deciles by Model Year

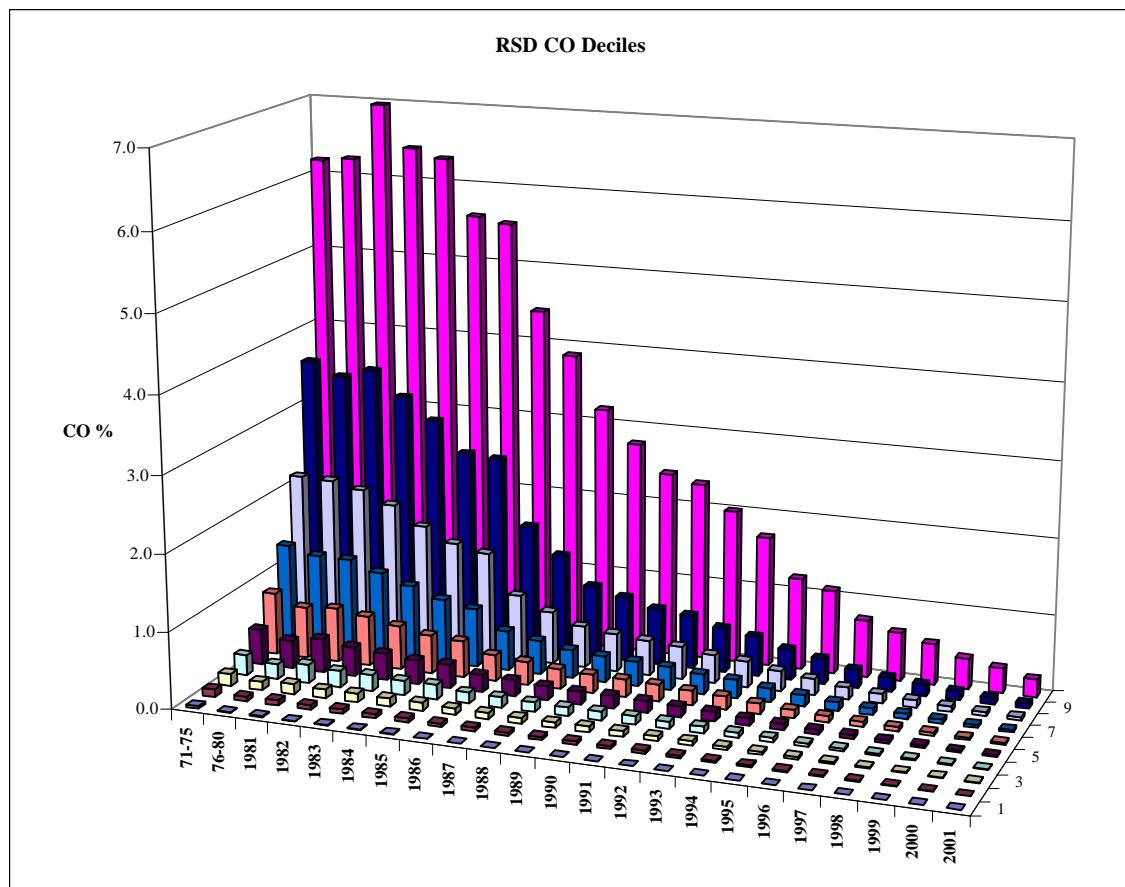
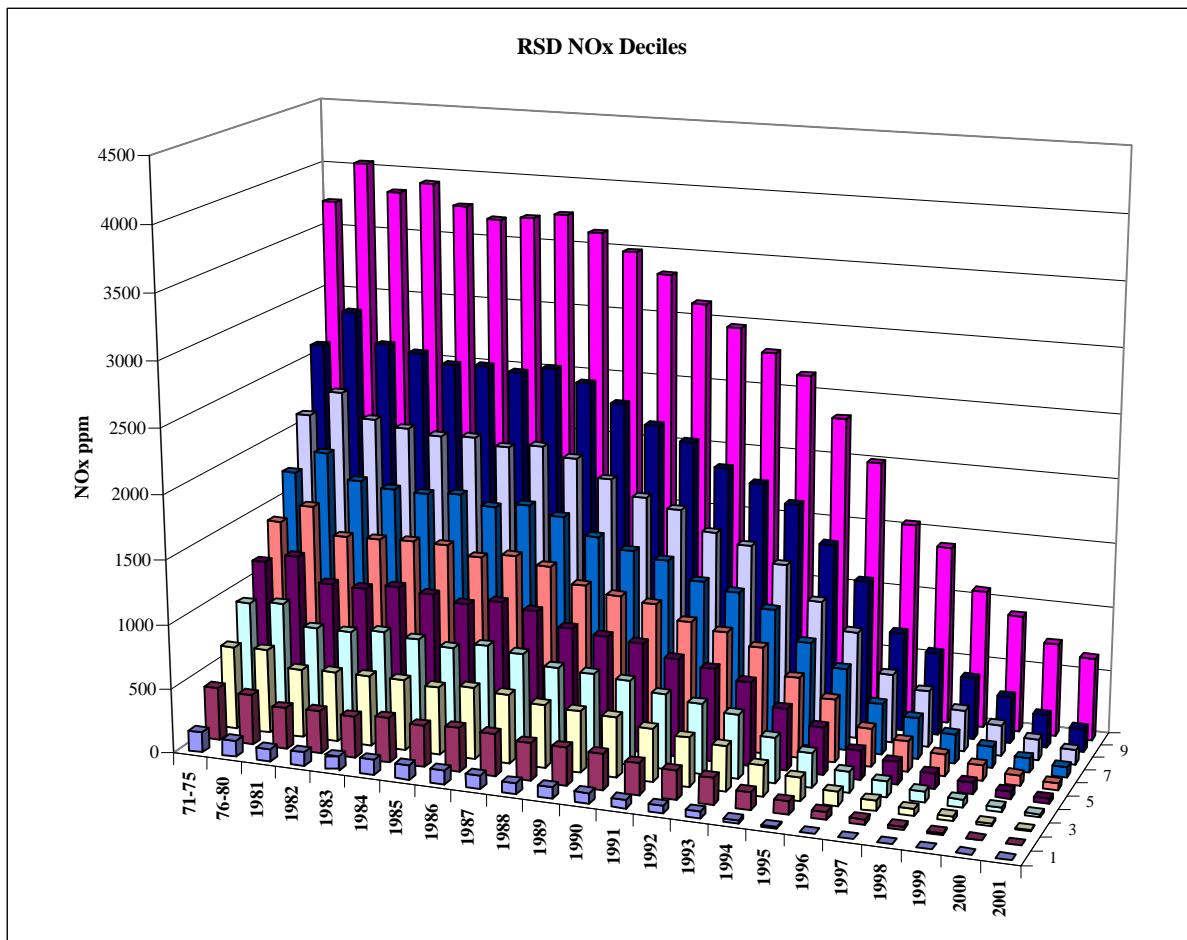


Figure V-6 Enhanced Area Vehicle NOx Deciles by Model Year



C. On-Road Emissions of Vehicles Before and After I/M Inspection

Figures V-7 through V-9 show emissions of vehicles in the Enhanced I/M area measured before their initial IM240 test and after their final IM240 test. As can be seen from the charts, there are significant reductions in HC and CO emissions for failing vehicles after the vehicles have been repaired. An HC and/or CO repair often results in increased NOx emissions. Therefore, in Figure V-9, the benefit from the few vehicles failing and obtaining NOx repairs is overwhelmed by the benefit from the many vehicles failing and obtaining HC and CO repairs.

It appears that average HC and CO emissions in the set of vehicles that will pass the test decrease just before inspection. This reduction is probably the result of pre-inspection repairs and tune-ups, which is a benefit that is not traditionally measured by I/M test results. Seasonal or other factors may also be affecting the on-road emission levels. More detailed investigation is required to quantify the benefit of pre-inspection repairs and its longevity.

Figure V-7 RSD HC Emissions Before and After IM240 Test

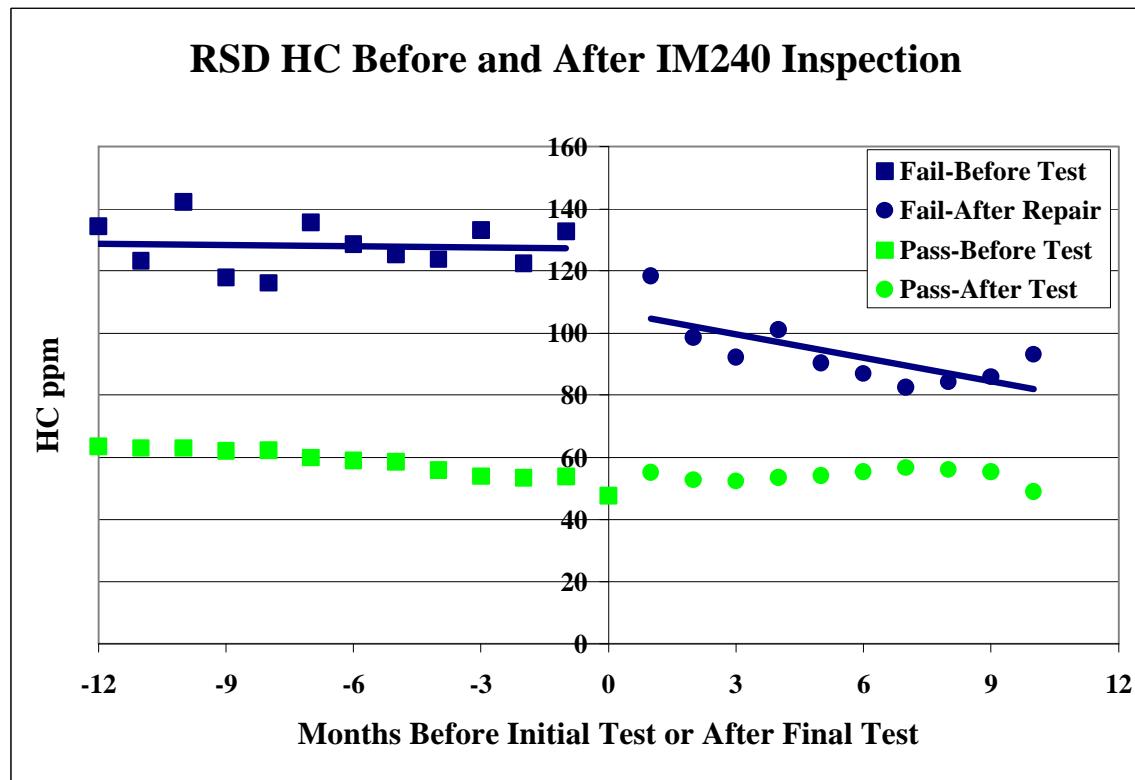


Figure V-8 RSD CO Emissions Before and After IM240 Test

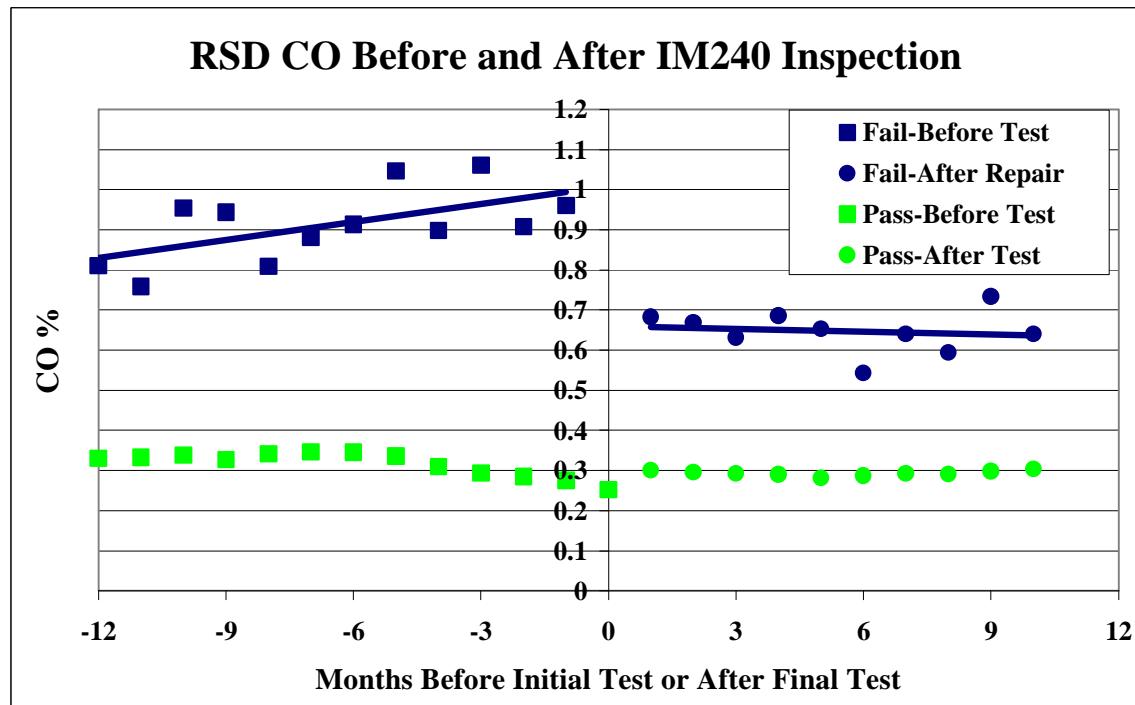
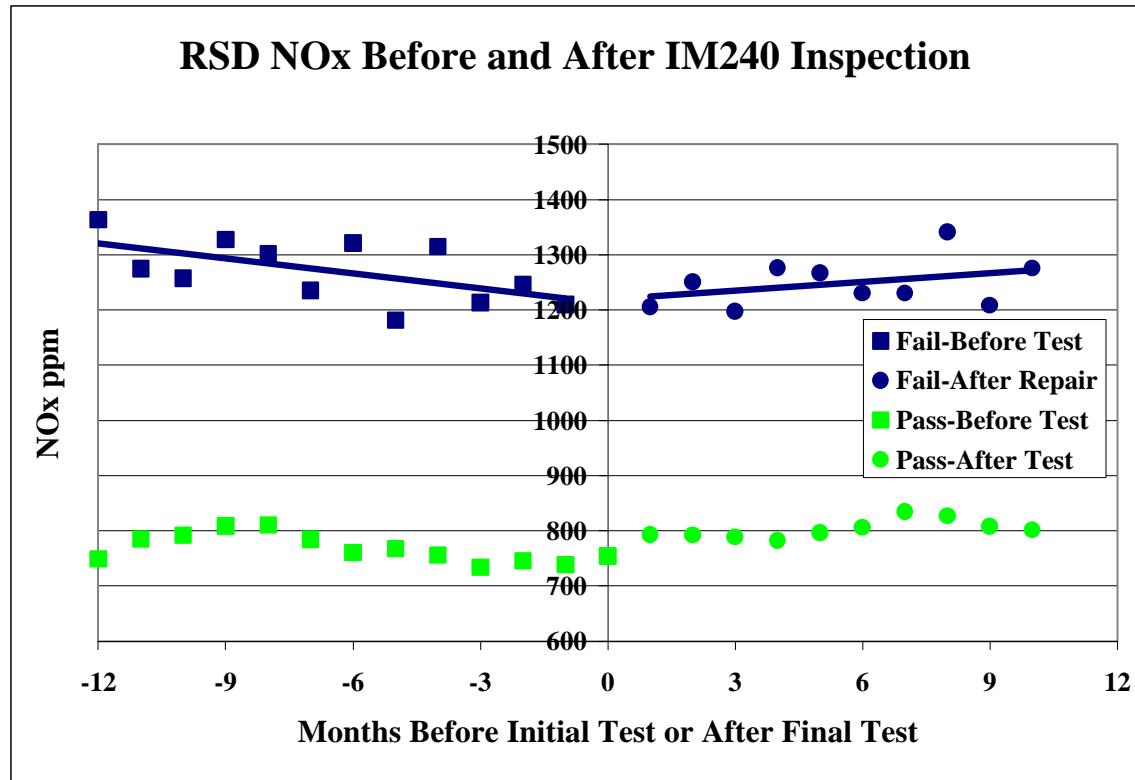


Figure V-9 RSD NOx Emissions Before and After IM240 Test



VI. Correlation of I/M Test Results and Remote Sensing

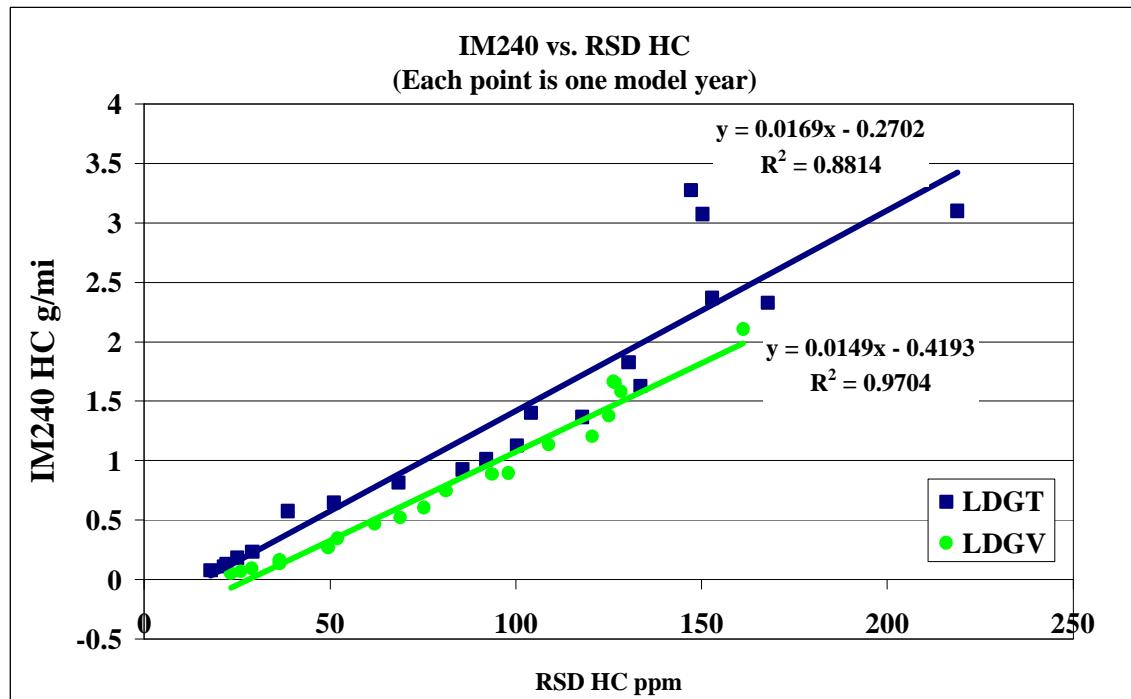
A. I/M Test Results vs. Average Vehicle Remote Sensing

To obtain a correlation between remote sensing measurements and station-based measurements, average remote sensing emissions were calculated for each unique vehicle using RSD measurements with a vehicle specific power between 5 and 25 kW/t. For vehicles that had been station tested, average RSD emission values were calculated by vehicle type and model year and compared to the station-based test result averages. In order to maintain as large a sample as possible, all remote sensing measurements were used, regardless of whether they occurred before or after the I/M test. The average of the initial and final station test results were used for comparison.

1. IM240 Test vs. Remote Sensing Correlation

Figures VI-1 through VI-3 show good correlations (R^2 values are close to 1.0) between remote sensing and IM240 test averages by model year for all pollutantsⁱ. LDGTs have relatively higher IM240 mass emission results for a given remote sensing concentration than LDGVs because of their larger size, larger engines and greater fuel consumption.

Figure VI-1 IM240 vs. RSD HC by Model Year



ⁱ The remote sensing results for CO and NOx pass close to the origin. For HC, however, there is an offset of about 25 ppm.

Figure VI-2 IM240 vs. RSD CO by Model Year

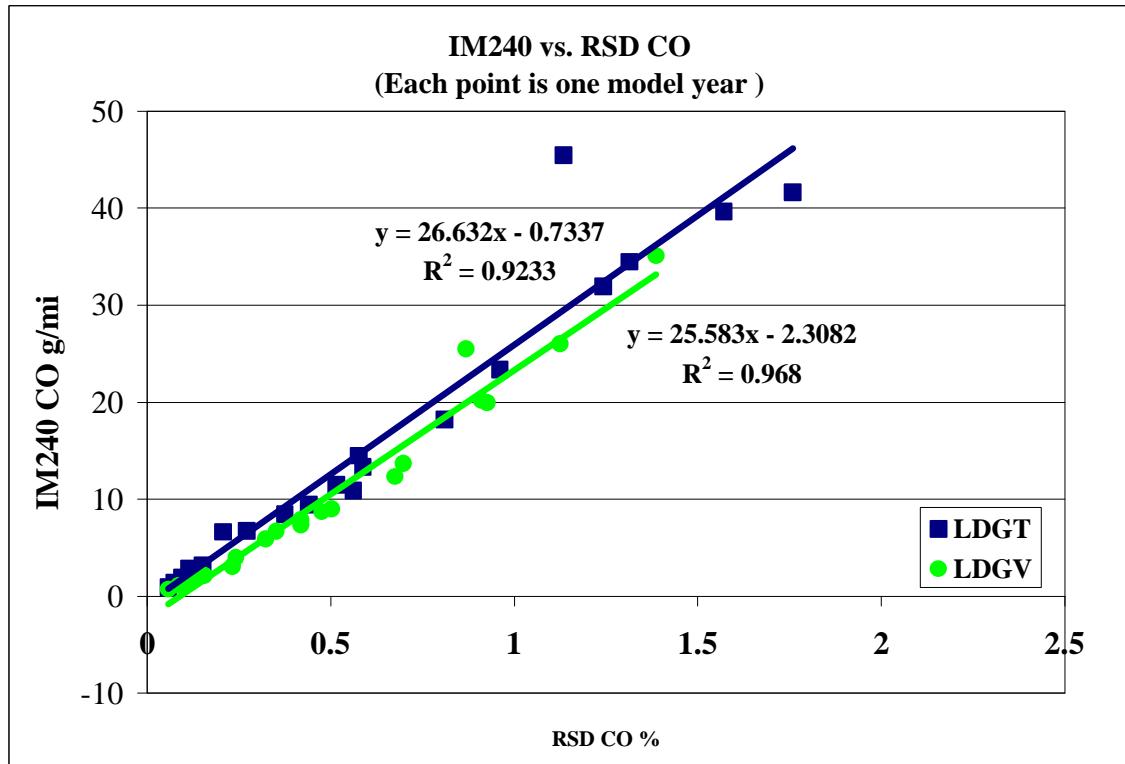
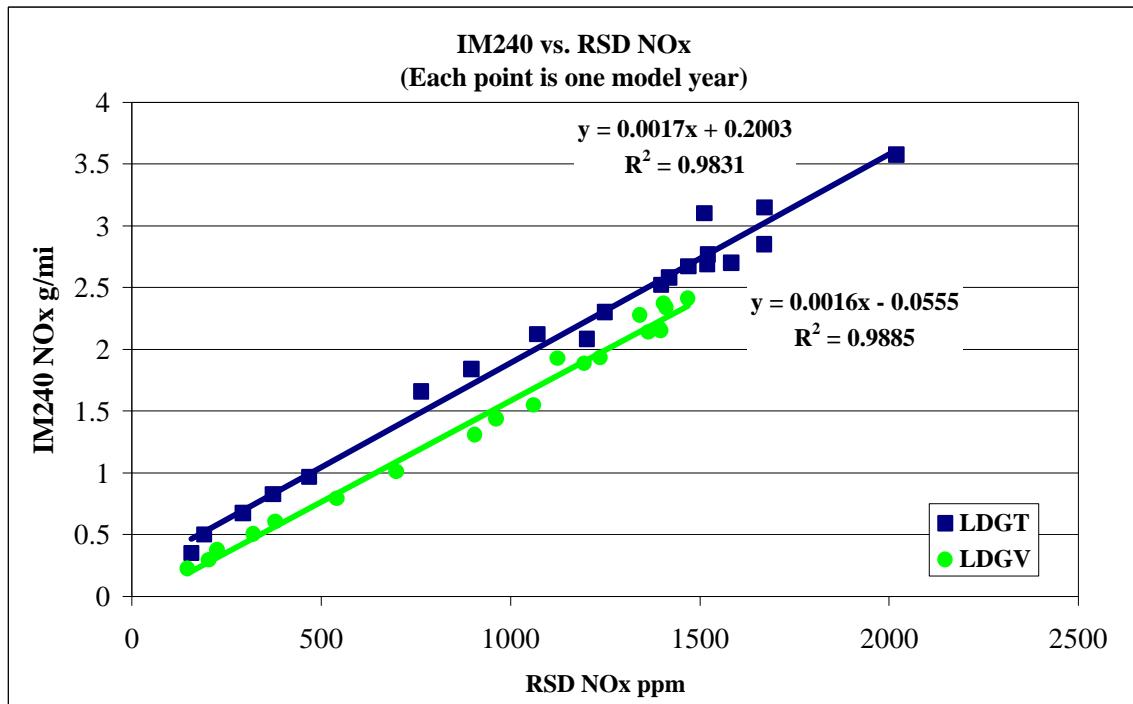


Figure VI-3 IM240 vs. RSD NOx by Model Year



2. Idle Test vs. Remote Sensing Correlation

Figures VI-4 and VI-5 show the correlations between remote sensing and idle test results for vehicles registered in the Basic and Enhanced areas. Because NOx emissions are not measured during idle tests, there is no NOx correlation chart. The vertical order of the regression lines matches the order of the legends. For simplicity, regressions were forced through zero since doing so had no noticeable impact on either the slopes or the R² values.

LDGTs again have relatively higher idle test results than LDGVs for a given RSD measurement. This result is unexpected as both the idle tailpipe test and remote sensing units measure pollutant concentrations rather than mass emissions. There is no obvious explanation, although it may have to do with exhaust dilution or dilution correction algorithms in either the remote sensing equipment or the idle test analyzers.

Only a few vehicles receive idle tests in the enhanced area. These include some four-wheel drive vehicles, certain vehicles with traction control, and 1981 and older vehicles. Enhanced area HC idle test results have higher values than Basic area HC idle test results (See Figure VI-4). In contrast, Enhanced area CO idle test results have relatively lower values than Basic area CO idle test results (See Figure VI-5)ⁱ.

Since the charts compare concentration measurements with the same units, one might expect the slope of these two charts to be close to unity (1.0). However, vehicles are measured under no load during the idle test, but under moderate load by on-road RSD units. Because of the difference in testing conditions, the tests are not directly comparable.

As indicated by the R² values in Figures VI-1 through VI-5, the correlations between remote sensing and idle test results are not as high as the correlations between remote sensing and IM240 test results. In other words, on-road RSD measurements provide an emission test that is more similar to the IM240 test than the idle test. This result is expected, because idle tests do not simulate real world driving conditions as the IM240 test does and the RSD units actually measure vehicles under real world conditions.

ⁱ The same test equipment is used in the enhanced and basic areas, so test equipment does not explain the difference in the correlations.

Figure VI-4 Idle Test vs. RSD HC by Model Year

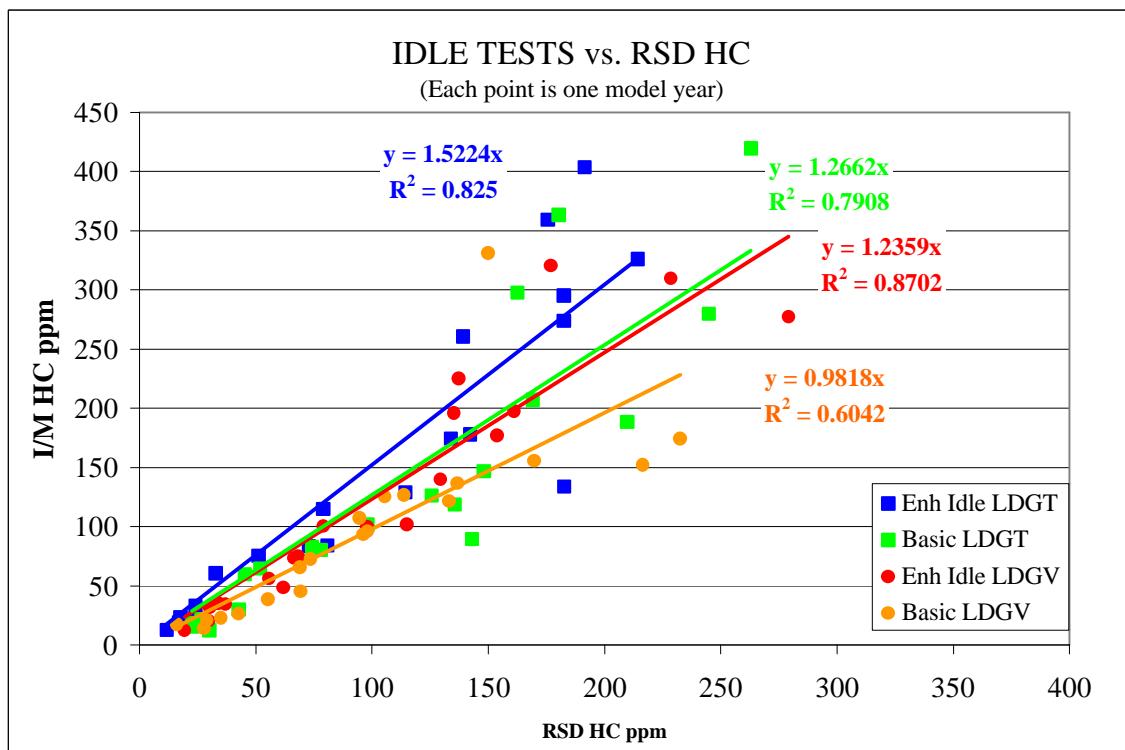
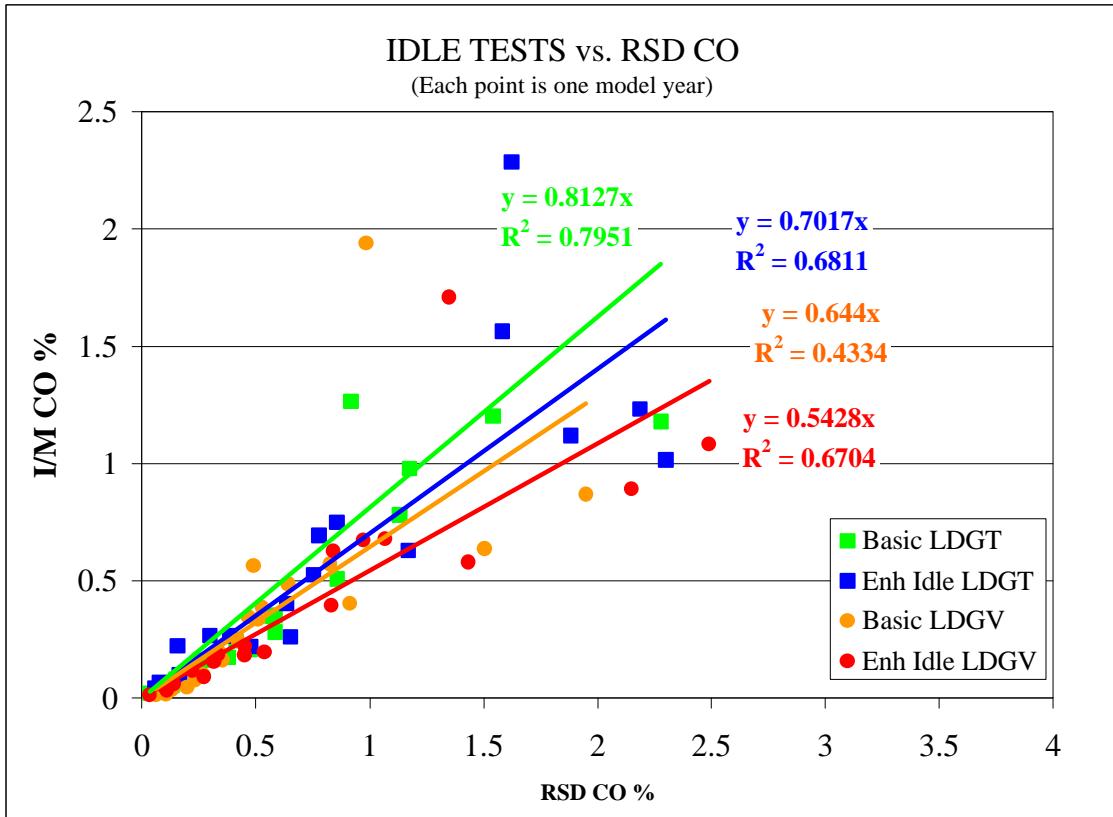


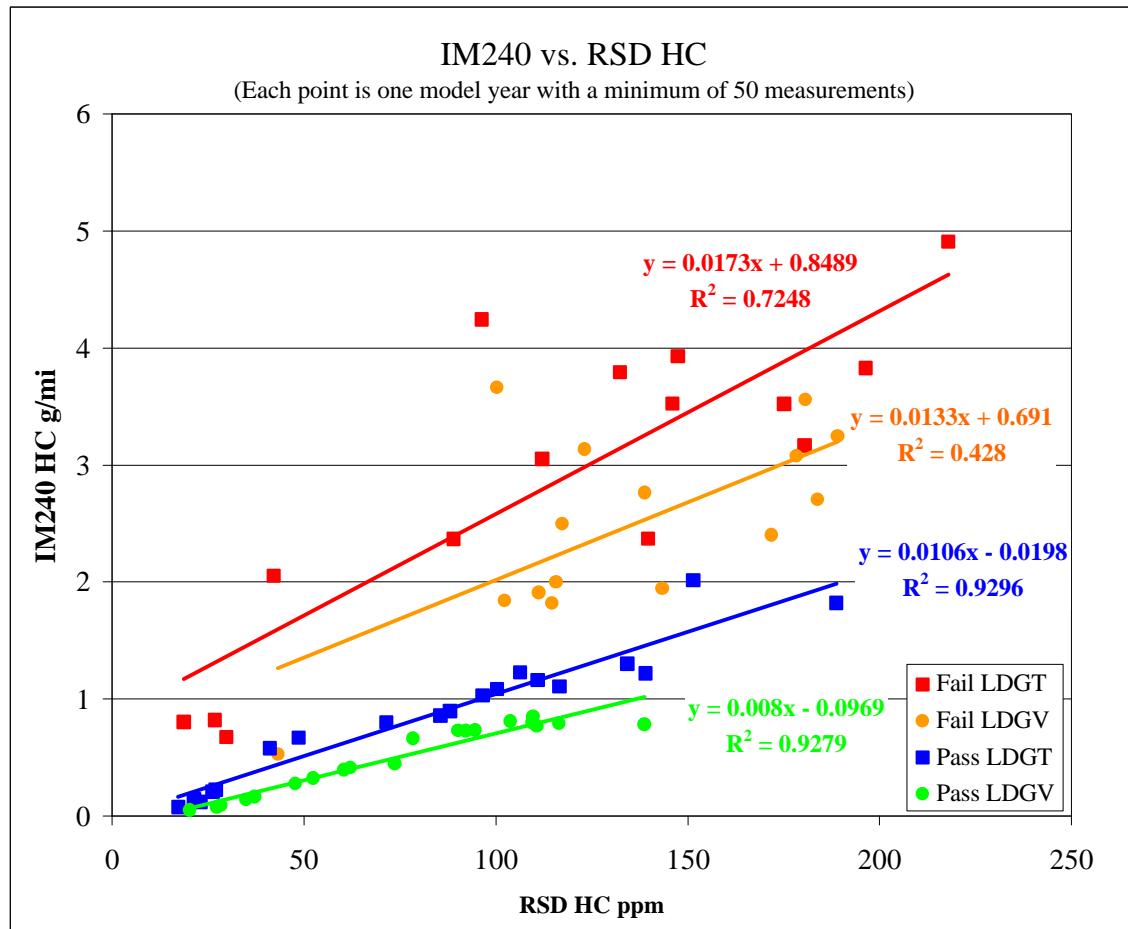
Figure VI-5 Idle Test vs. RSD CO by Model Year



B. IM240 Initial Test Result vs. Average Pre-test Remote Sensing

RSD measurements made within the six months preceding the initial test for a vehicle were aggregated by result (pass/fail), vehicle type (LDGV/LDGT) and model year and plotted against the average initial IM240 test results for the same vehicles. Figures VI-6 through VI-8 show the resulting regressions for HC, CO and NOx. Each model year is represented by a minimum of 50, and typically by several hundred, measurements. The R^2 correlations between average IM240 emissions and average RSD emissions by model year range from 0.64 to 0.96.

Figure VI-6 Initial IM240 vs. Pre-Test RSD HC by Model Year



In these charts, the measured separation between LDGVs and LDGTs remains. There is also a much larger offset between vehicles that fail IM240 and vehicles that pass IM240 than was indicated in Figures VI-1 through VI-3. Failing vehicles not only have higher tailpipe emissions than passing vehicles, but they also emit a greater mass of emissions during the IM240 test than their on-road tailpipe concentration would suggestⁱ. Several factors contribute to this:

- Within the same vehicle type, e.g. LDGV, the vehicles failing the IM240 test tend to be heavier and as a result have poorer fuel economy. Consequently, they emit a greater mass of exhaust for a given tailpipe pollutant concentration than would lighter, more fuel efficient vehicles.
- Vehicles failing the IM240 test may also have inefficient combustion. Vehicles with inefficient combustion use more fuel and emit a greater total mass of exhaust than well tuned vehicles of the same make and model.

ⁱThis evidence raises the possibility that an on-road evaluation using remote sensing measurements to measure tailpipe concentrations vs. mass emission is likely to underestimate the mass emissions reductions of an I/M program. In the case of the Gateway Clean Air Program, this could be researched by comparing the total mass and volume of combustion products produced by IM240-failing vehicles and IM240-passing vehicles.

- Some failing vehicles perform worse on their IM240 inspection than they would on a series of IM240 tests.

Figure VI-7 Initial IM240 vs. Pre-Test RSD CO by Model Year

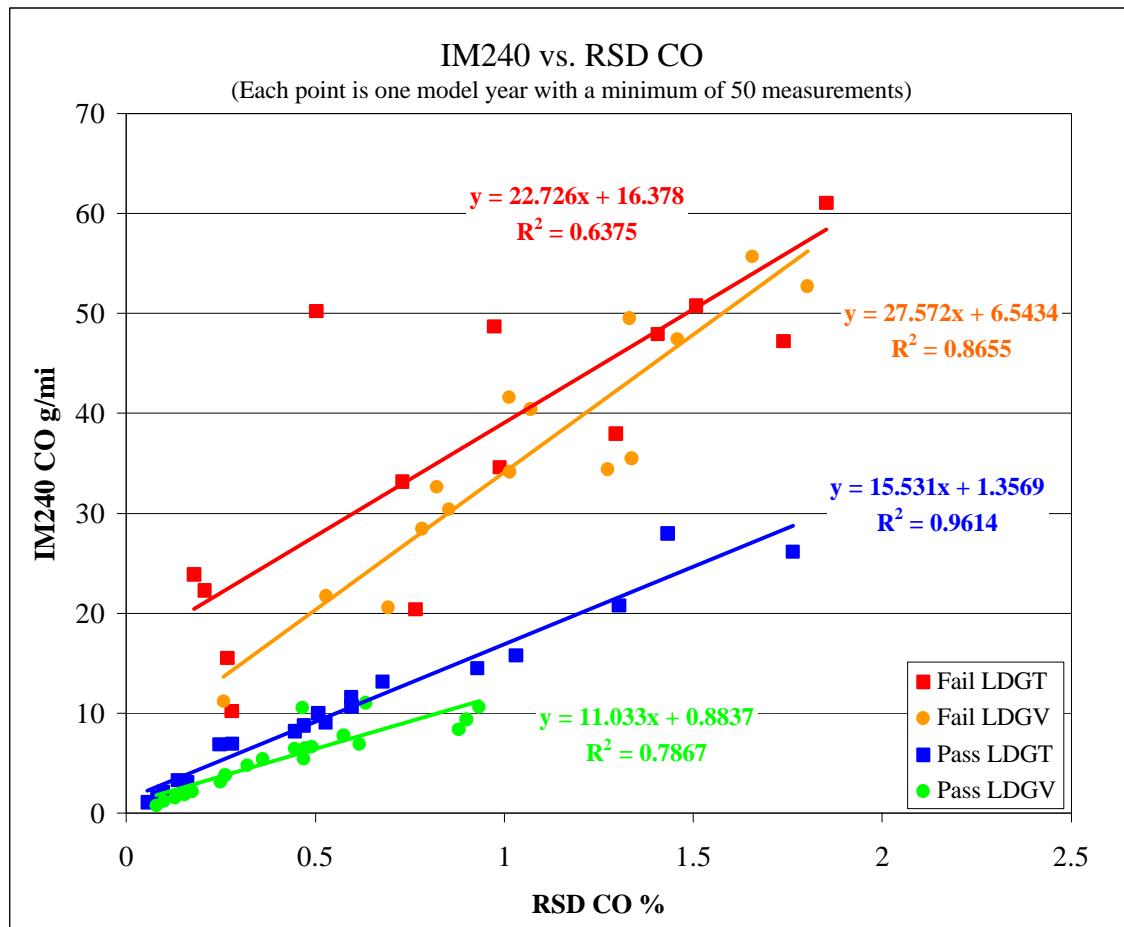
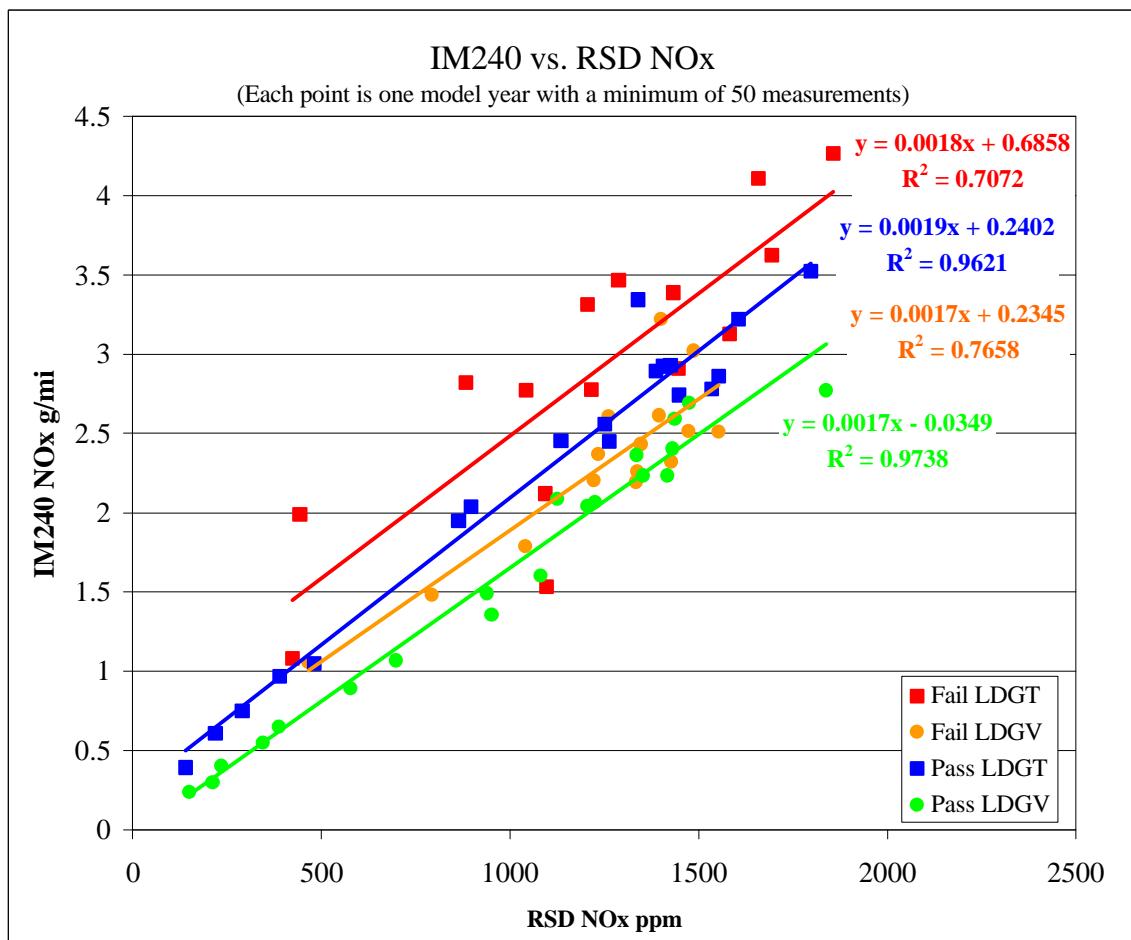


Figure VI-8 Initial IM240 vs. Pre-Test RSD NOx by Model Year



VII. Estimate of Combined Program Reductions

In section IV. B. 2., percentage reductions from the Gateway Clean Air Program were estimated for each model year. In order to estimate the overall RapidScreen impact, two additional tasks remain: the conversion of idle test emission results from concentration to mass equivalents, and the weighting of emission results by the average number of annual miles driven.

A. Conversion of Idle Test Results

The remote sensing measurement correlations developed in section VI. A. are used to convert all test values to IM240-equivalent values.

The IM240 test correlations are summarized in Table VII-1, where:

$$\text{IM240 (g/mi)} = (A \times \text{RSD}) + B$$

Table VII-1 IM240 vs. RSD Correlation

Emission	Type	A	B	R2
HC	LDGV	0.0149	-0.4193	0.97
HC	LDGT	0.0169	-0.2702	0.88
CO	LDGV	25.58	-2.31	0.97
CO	LDGT	26.63	-0.73	0.92
NOx	LDGV	0.0016	-0.0555	0.99
NOx	LDGT	0.0017	0.2003	0.98

The idle test correlations are summarized in Tables VII-2 and VII-3, where:

$$\text{Idle Test (ppm or %)} = C \times \text{RSD}$$

Table VII-2 Enhanced Idle vs. RSD Correlation

Emission	Type	C	R2
HC	LDGV	1.236	0.87
HC	LDGT	1.522	0.83
CO	LDGV	0.543	0.67
CO	LDGT	0.702	0.68

Table VII-3 Basic Idle vs. RSD Correlation

Emission	Type	C	R2
HC	LDGV	0.982	0.60
HC	LDGT	1.266	0.79
CO	LDGV	0.644	0.43
CO	LDGT	0.813	0.80

Rearranging the idle test RSD equation yields:

$$RSD = (1 / C) \times \text{Idle Test.}$$

This is substituted into the IM240 correlation to give:

$$IM240 (\text{g/mi}) = A \times [(1 / C) \times \text{Idle Test}] + B$$

Or,

$$IM240 (\text{g/mi}) = [(A / C) \times \text{Idle Test}] + B$$

The resulting idle test to IM240 test conversion factors are summarized in Tables VII-4 and VII-5. The idle test vs. RSD correlations are not as high as the IM240 vs. RSD correlations as shown by the R² values in the tables VII-2 and VII-3. Therefore, the calculation of mass emissions from idle test measurements is an approximation.

Table VII-4 Enhanced Idle to IM240 Conversion

Emission	Type	(A / C)	B
HC	LDGV	0.0121	-0.4193
HC	LDGT	0.0111	-0.2702
CO	LDGV	47.13	-2.31
CO	LDGT	37.95	-0.73

Table VII-5 Basic Idle to IM240 Conversion

Emission	Type	(A / C)	B
HC	LDGV	0.0152	-0.4193
HC	LDGT	0.0133	-0.2702
CO	LDGV	39.73	-2.31
CO	LDGT	32.77	-0.73

B. Annual Mileage Weighting

Because of data entry errors and odometer rollover on older, high mileage vehicles, obtaining estimates of annual mileage from the Gateway Clean Air Program odometer readings for each model year and type of vehicle is not recommended. To avoid these problems, the national average annual mileages that EPA developed as part of the development of the Mobile6 inventory model⁸ have been used.

The estimated annual mileages are shown in Table VII-6 for LDGVs and LDGTs. Since EPA gives separate estimates of mileage for LDGTs below and above 6,000 pounds GVWR, an assumption of an 80:20 mix of these trucks, respectively, has been used to generate Table VII-6. This table indicates that newer model year vehicles are driven more miles annually than older vehicles. It also indicates that 1988 and newer model year LDGTs, which emit greater masses of pollution than LDGVs (See section VI. A. 1.), are driven more miles annually than 1988 and newer model year LDGVs.

Table VII-6 Estimated Annual Mileage

Year	LDGV	LDGT
1981 &		
older	5,420	4,154
1982	5,701	4,588
1983	5,997	5,055
1984	6,308	5,556
1985	6,636	6,093
1986	6,980	6,663
1987	7,342	7,269
1988	7,723	7,911
1989	8,124	8,589
1990	8,546	9,305
1991	8,989	10,057
1992	9,456	10,849
1993	9,947	11,681
1994	10,463	12,553
1995	11,006	13,465
1996	11,577	14,420
1997	12,178	15,417
1998	12,810	16,459
1999	13,475	17,546
2000	14,174	18,680
2001	14,910	19,863

C. Annual Emissions Reductions

The average initial and final emissions for each test type, vehicle type and model year, (See Appendix B), are multiplied by the number of vehicles and the annual mileage to determine the initial and final tons of emissions and, therefore, the tons of reduction. In the case of vehicles tested using the idle test, the results for each year are converted to IM240 equivalents using the conversion equations developed in section VII. A. The results of the computations for each model year are included in Appendix C.

Table VII-7 first shows the reductions from the RapidScreen audit tests. Based on the audit tests, the second part of the table projects the potential reductions from the RapidScreen vehicles if all RapidScreened vehicles had been tested at a station. The third part of the table shows the reductions from the vehicles that were tested at inspection stations, which includes the RapidScreen audit vehicles. The total potential reductions from the program are the combination of the potential reductions from the RapidScreened vehicles plus the actual reductions from the vehicles tested at stations.

In Table IV-4, RapidScreen effectiveness was expressed without reference to the annual vehicle miles traveled (VMT) by each model year of vehicles. Table VII-7's more complete analysis shows that the RapidScreen program effectiveness increases when the VMT estimates are factored in. During the startup period, the RapidScreen program retained 96.1%, 97.2% and 88.2% respectively of potential HC, CO and NOx tailpipe emission reductions in vehicles subject to testing.

These calculations show that for the vehicles initially tested through February 2001, the Gateway Clean Air Program eliminated 662 tons of HC, 8,880 tons of CO and 125 tons of NOx for one year of vehicle travel – based on the IM240 driving cycle.

Table VII-7 Estimated Annual Tons Of Reduction

Audit Tests	Audit Vehicle Reductions (tons/yr)			
	Unique Vehicles	HC	CO	NOx
Enhanced IM240	3,765	0.60	5.58	0.38
Enhanced Idle	203	0.00	-0.02	0.00
Basic Idle	98	0.02	0.21	0.00
Total	4,066	0.62	5.77	0.38

RapidScreen	Potential from RS Vehicles (tons/yr)			
	Unique Vehicles	HC	CO	NOx
Enhanced IM240	166,502	26.5	246.7	16.7
Enhanced Idle	8,081	-0.1	-0.9	0.0
Basic Idle	3,505	0.6	7.6	0.0
Total	178,088	27.1	253.4	16.7

Station I/M Tests	Station Reductions (tons/yr)			
	Unique Vehicles	HC	CO	NOx
Enhanced IM240	411,022	416.9	5,772.3	125.2
Enhanced Idle	29,920	110.1	1,340.4	0.0
Basic Idle	48,224	134.7	1,766.8	0.0
Total Actual	489,166	661.8	8,879.5	125.2

Total Potential Reductions	688.9	9,132.8	142.0
<i>RapidScreen Impact</i>	3.9%	2.8%	11.8%
Retained Reductions	96.1%	97.2%	88.2%

The vehicles tested through February 2001 are estimated to be 58% of the vehicles that will be tested during the full biennial cycle. Once all vehicles in the Enhanced area fleet have been tested, the reductions for each calendar year of fleet travel will be larger.

The tons of reductions cited here do not relate directly to the total mobile emissions inventory. The reductions cited are for tailpipe emissions and are in terms of the IM240 driving cycle. State Implementation Plan reductions are based on different driving cycles, are subject to many adjustments for speed, road type, temperature, air conditioning loads, etc., and therefore are larger than the IM240 measured reductions.

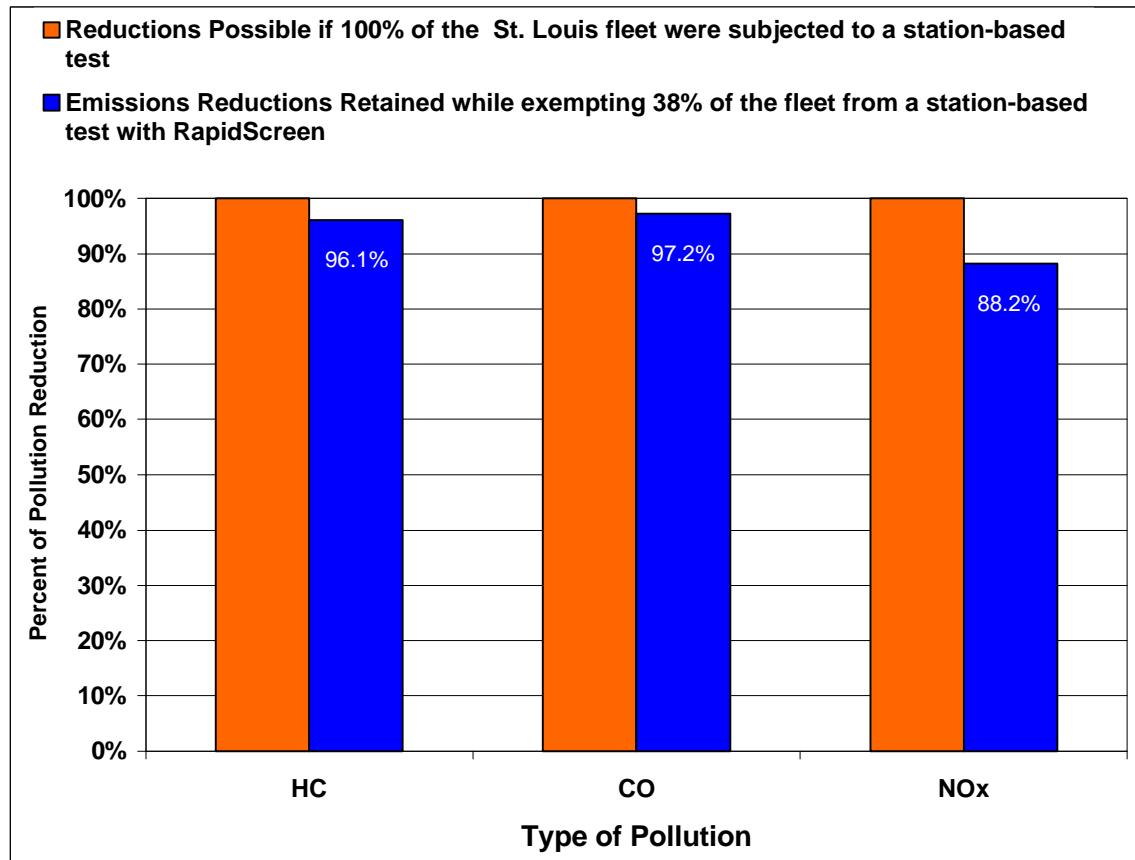
Also not calculated here are the reductions in evaporative emissions resulting from gas cap testing. In Table IV-5, it was estimated the RapidScreen program retains 80% of the potential HC reductions from gas cap testing.

Table VII-7 also shows that, during the period covered by this RapidScreen Startup Report, 178,088 vehicles were RapidScreened, and 489,166 vehicles received a station test. Therefore, 27% out of the 667,254 unique vehicles considered in this analysis were RapidScreened.

Vehicles less than two years old are statutorily exempt from inspection because the emission reductions that would be obtained by subjecting them to inspection and repair would be extremely small, if any. The vehicles less than two years old are estimated to be 15% of registered vehicles. Given this assumption, the vehicles greater than two years old, which must be inspected via RapidScreen or at a station, make up 85% of registered vehicles. Therefore, 23% of the registrations were RapidScreened (27% of Gateway Clean Air Program tests x 85% of vehicles required to be emission tested). The total number of RapidScreened vehicles make up 38% of registrations (23% exempted from a station test via RapidScreen + 15% exempted from a station test by statute).

Figure VII-1 illustrates the emission reductions retained by the Gateway Clean Air program while exempting 38% of vehicles from inspectionⁱ.

Figure VII-1 Air Quality Impact of RapidScreen



ⁱ It is assumed that no additional reductions would be obtained by testing vehicles less than two years old.

Figures VII-2 and VII-3 show the annual HC inventory and reductions by model year and vehicle type for the vehicles tested through February 2001, based on the IM240 driving cycle. In these two charts, the reductions and remaining emissions of all vehicles older than 1981 are included with the reductions and remaining emissions of 1981 vehicles. The biennial testing cycle of the Enhanced area causes the difference between the sizes of the bars for odd model year vehicles vs. even model year vehicles.

These two charts indicate that older vehicles, which are fewer in number and driven fewer miles each year, still contribute a large portion to the HC emissions inventory in the St. Louis nonattainment area.

Figure VII-2 LDGV Reductions and Remaining Emissions

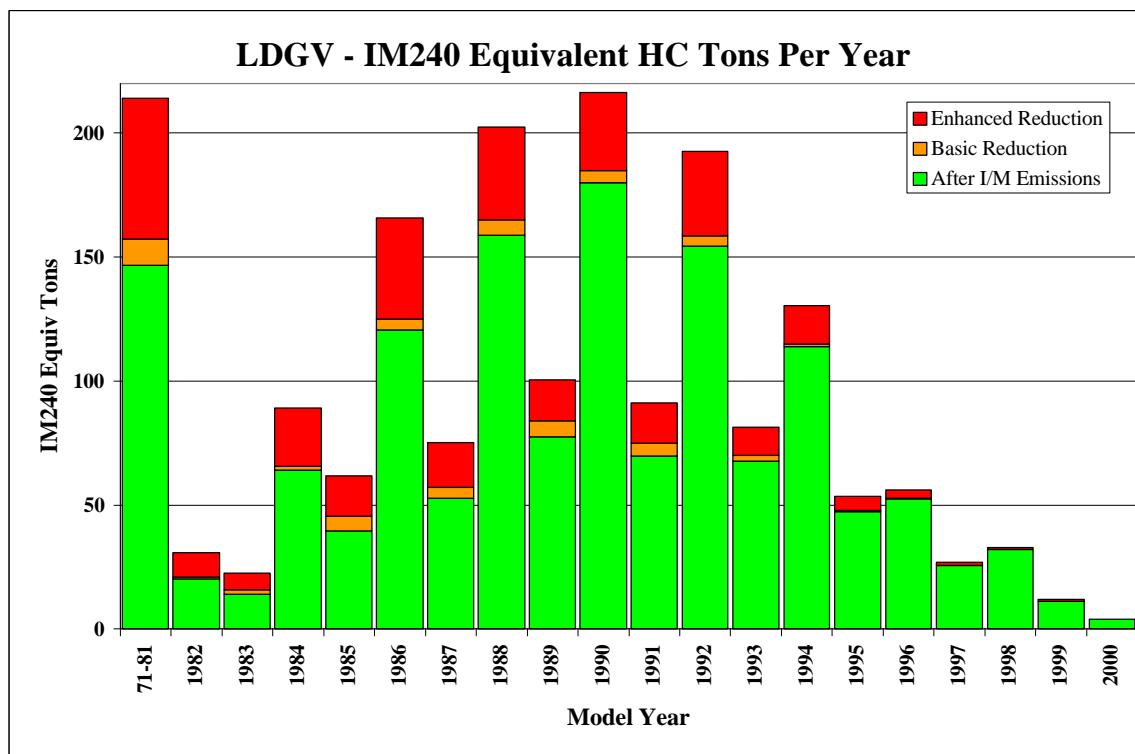
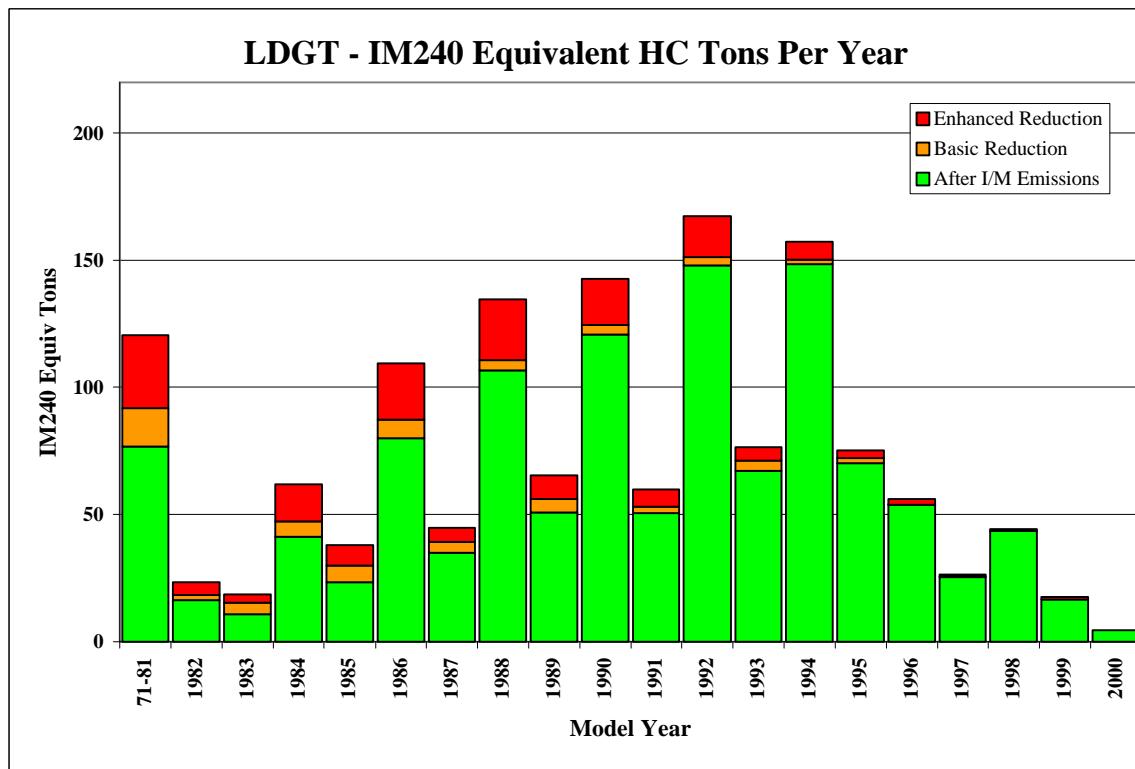


Figure VII-3 LDGT Reductions and Remaining Emissions



Figures VII-4 through Figures VII-9 illustrate the distribution of the reductions by model year and vehicle type for HC, CO and NOx. In these two charts, the reductions and remaining emissions of all vehicles older than 1981 are included with the reductions and remaining emissions of 1981 vehicles.

IM240 test cutpoints have an impact on the emissions reduced in each model year. For example, in Figure VII-8, the LDGV NOx chart, the impact of the IM240 cutpoint change from 3.0 g/mi for 1990 vehicles to 2.5 g/mi for 1991 vehicles greatly increases the number of tons reduced, even though fewer 1991 LDGVs (10,588) than 1990 LDGVs (26,294) were tested during the startup period.

Figure VII-4 LDGV HC Reductions

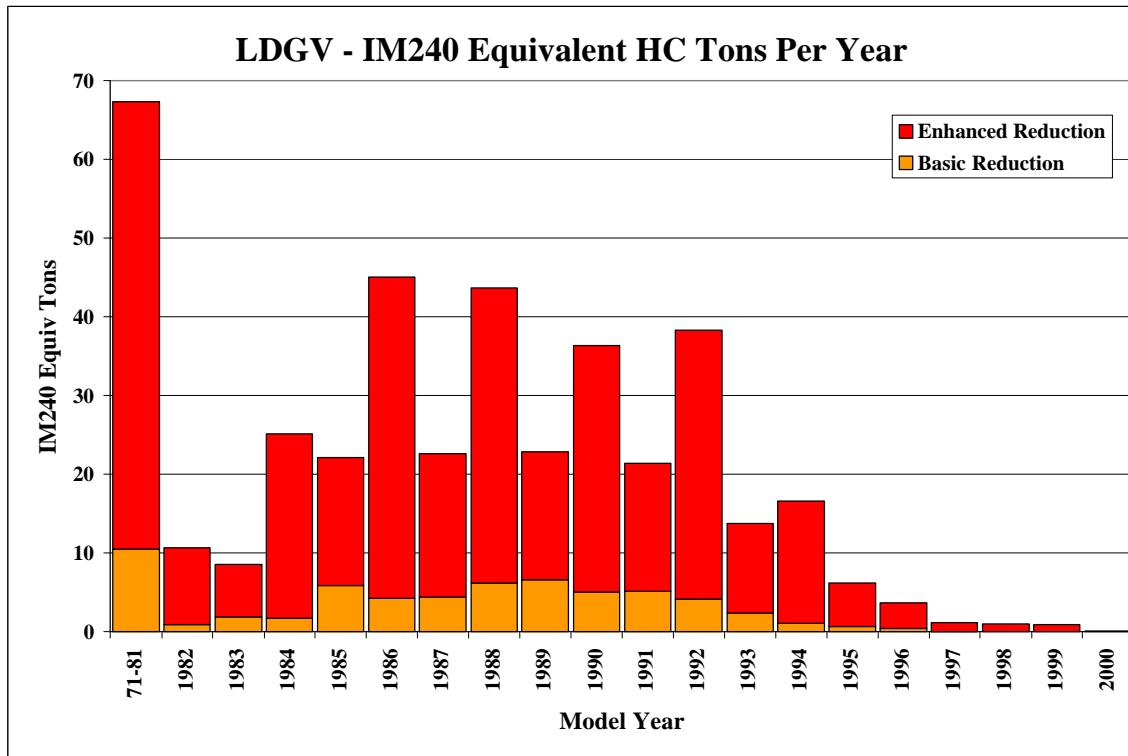


Figure VII-5 LDGT HC Reductions

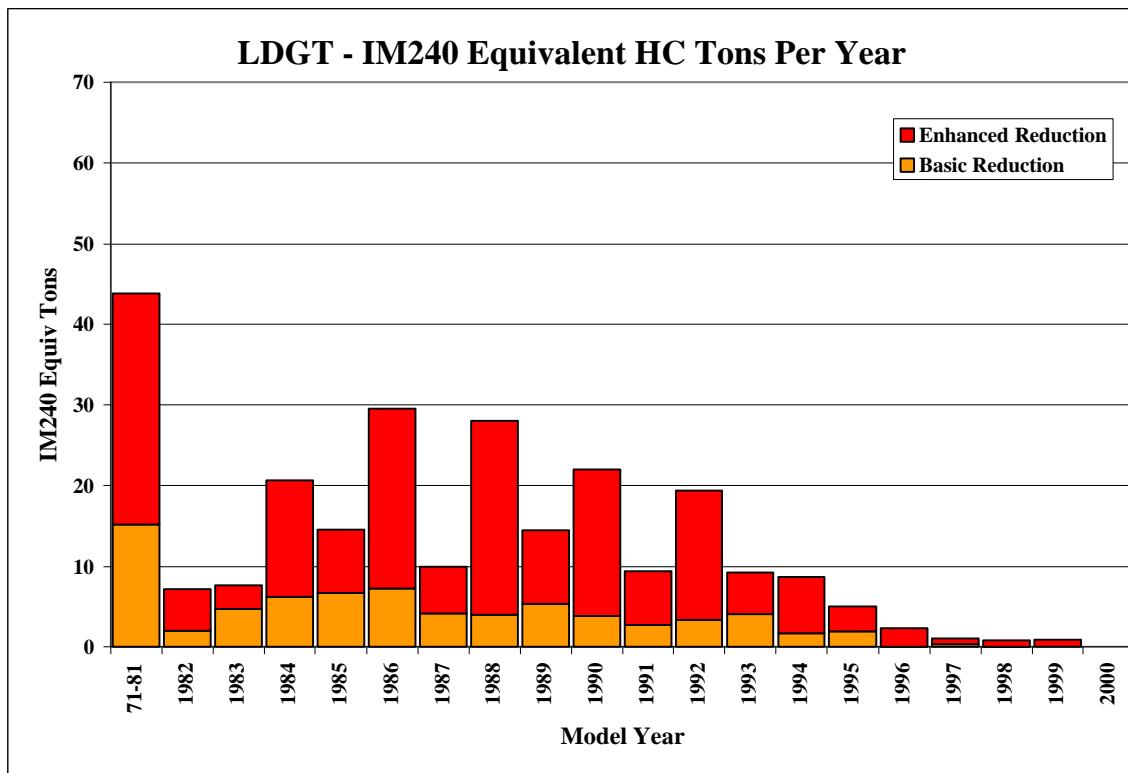


Figure VII-6 LDGV CO Reductions

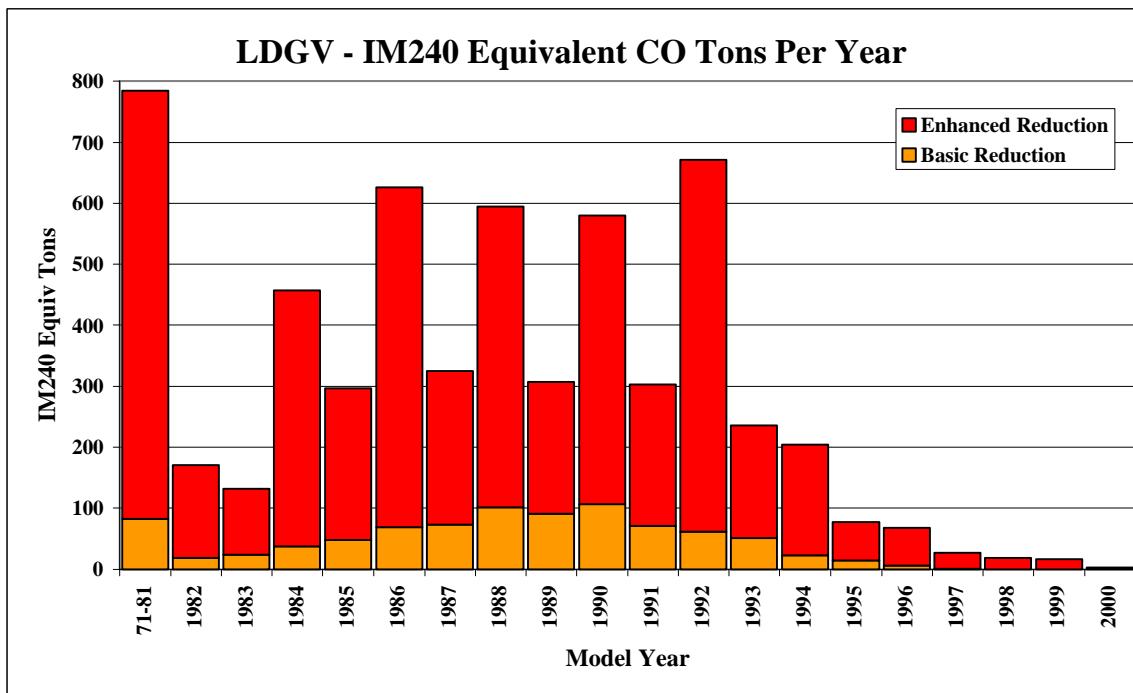


Figure VII-7 LDGT CO Reductions

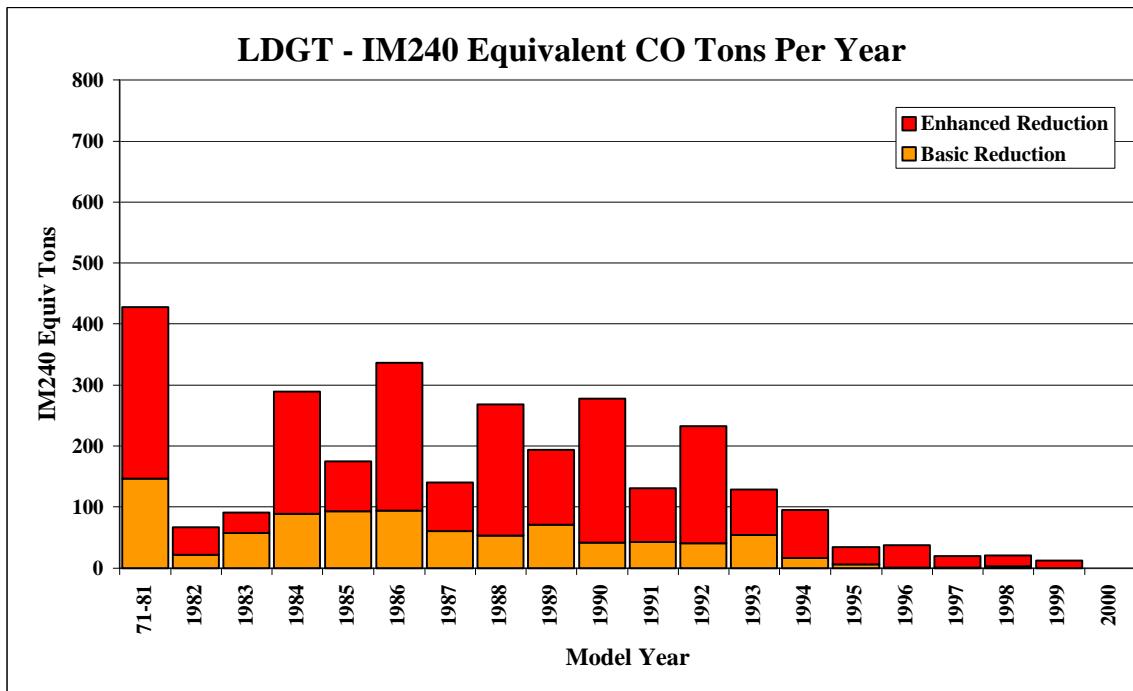


Figure VII-8 LDGV NOx Reductions

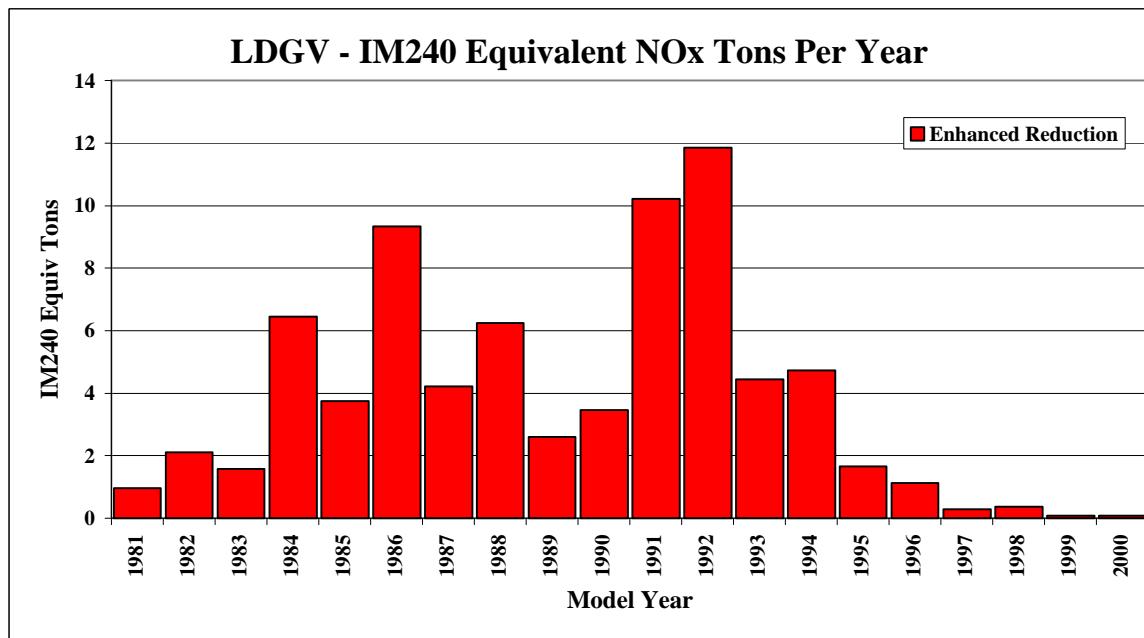
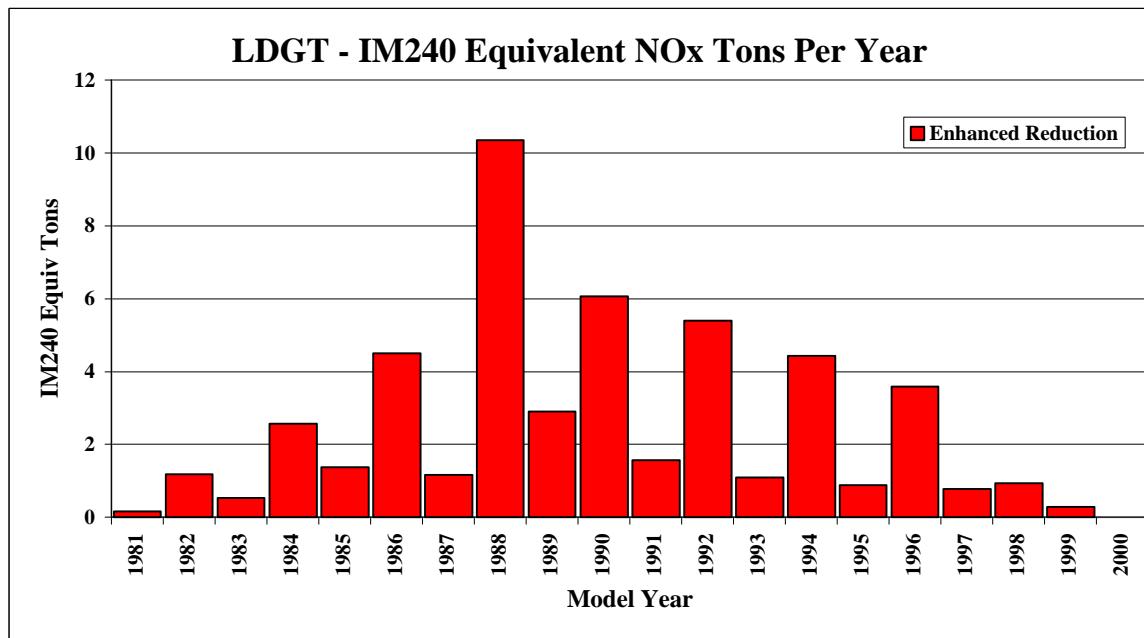


Figure VII-9 LDGT NOx Reductions



VIII. Program Modifications and Additional Evaluation

A. Suggestions for Program Modifications

1. Focus the Quality Control Effort More on the RapidScreen Notices

Presently, 10% of the tag edited datasets (VDR) and 10% of the vehicle images for RapidScreen qualified vehicles (VMR) are visually checked for a correct match to registered vehicles. The average monthly volume of records verified in the VDR table (32,097) is much greater than the average monthly volume of records verified in the VMR table (476). However, it is the VMR records for the vehicles that are to be sent RapidScreen notices for which accuracy is of paramount importance.

The reported VMR error rate is about 0.4% due to tag edit errors and 1.6% from other causes, including time lags in the registration database. The effectiveness of reducing the percentage of VDR tag edit audits and increasing the percentage of VMR RapidScreen qualified vehicle image verifications could be investigated to determine the most effective QC and QA combination.

2. Consider Widening the Twelve Month RSD Collection Window

Current EPA guidance calls for remote sensing measurements to be made within twelve months of the next vehicle registration renewal date in order to qualify a vehicle for RapidScreen. Since the Gateway Clean Air Program's Enhanced area has a biennial test cycle, expanding this collection window could increase the number of vehicles that qualify for RapidScreening using the RSD method. A simulation using the existing program results could determine whether expanding the window is worthwhile, considering the additional vehicles qualified and the change in emissions reductions.

B. Suggestions for Additional Evaluation

1. Comprehensive Program Evaluation

The RSD data can be used to more fully investigate detailed aspects of program effectiveness, e.g. pre-inspection repairs, repair effectiveness, post-repair deterioration and program compliance such as that described by Wenzel using Arizona remote sensing data⁶.

A limited analysis of the on-road emissions before and after vehicle repair has been included in section V. C., and correlations between on-road measurements and the I/M tests have been developed in section VI. A. As more on-road data is collected, more detailed analysis will be possible and could provide insights into ways of improving Gateway Clean Air Program effectiveness.

2. Evaluation of High Emitter Identification

It is clear from the emissions deciles of vehicles measured on-road (See section V. B.) that there are considerable excess emissions remaining among a small percentage of older vehicles. These results indicate that vehicle emissions do increase between biennial inspections and, possibly, that

vehicle owners choose to pay for short cut repairs that do not last for two years. If these high emitting vehicles were required to come in for an emission inspection between test cycles, the effectiveness of the Gateway Clean Air Program would be improved.

A simulation of the effectiveness of high emitter identification could be undertaken to evaluate alternative identification protocols and the impact of off-cycle emission inspections on program effectiveness.

3. *Evaluation of Evaporative Emissions Index*

The existing low emitter index does not incorporate any estimates of evaporative emissions. The gas cap failures are much more randomly distributed across vehicles by model year than are tailpipe emission failures. Nevertheless, it may be worth investigating whether there are any sufficiently high gas cap failure rates for specific make/models, i.e. pattern failures, that would make it worth disallowing these make/models from being RapidScreened.

Appendix A – RapidScreen Coverage

- **A1 – RapidScreen Sites**
- **A2 – RapidScreen Coverage by ZIP Code**
- **A3 – RapidScreen Coverage by Year, Make and Model**

Appendix A Notes

Appendix A1

Althouh the site references number as high as 91, the actual number of sites used was only 74. Some candidate sites were rejected.

Appendix A3

In 2000, the LEI method was applied to even model year vehicles only, and its use was terminated in November 2000. Therefore, no odd model year vehicles qualified for RapidScreen using the LEI method.

Appendix A1 – RapidScreen Sites

Site Ref	Type	Description	Township	Zip Code	Slope Degr	VSP kW/t	Valid Tests	Avg CO
1 Frwy on-ramp		Clark St. on to I - 64 W.	N/A	63103	3.7	16.5	2,348	0.37
2 Frwy on-ramp		14th St. on to I - 64 W.	N/A	63103	1.5	13.8	4,122	0.32
3 Frwy on-ramp		Brentwood Rd. SB on to I - 64 W.	Richmond Hts	63117	2.3	14.9	135,457	0.27
4 Frwy on-ramp		Lindbergh Rd. NB on to I-64 E.	Ladue	63124	0.4	16.2	43,922	0.26
5 Frwy on-ramp		Jefferson St. on to I - 44 W.	N/A	63104	2.1	17.0	59,056	0.38
8 Frwy on-ramp		Elm Ave. on to I - 44 E.	Webster Groves	63119	2.3	19.3	22,010	0.31
9 Frwy on-ramp		Blendon Pl. on to I - 64 W.	Richmond Hts	63117	2	14.5	39,400	0.31
11 Frwy on-ramp		Bates Rd. on to I - 55 N.	N/A	63111	1.6	16.6	17,011	0.62
12 Frwy on-ramp		Carondolet Blvd. on to I - 55 S.	Wilbur Park	63123	2.9	17.6	63,822	0.43
13 Frwy on-ramp		Reavis Barracks Rd. on to I - 55 S.	Unincorporated	63123	3.4	20.7	106,268	0.39
14 Frwy on-ramp		Germana Rd. on to I - 55 N.	N/A	63111	2.3	17.6	19,264	0.54
18 Frwy on-ramp		Airflight Dr./Pear Tree Lane on to I - 70 E.	Edmundson	63145	-0.4	15.1	2,386	0.53
19 Frwy on-ramp		Bermuda Rd. on to I - 70 W.	Normandy	63121	-0.3	13.0	5,282	0.55
21 Frwy on-ramp		Jennings Station Rd. N. on to I - 70 W.	Pine Lawn	63120	1.6	17.2	10,544	0.49
27 Frwy on-ramp		Clarkson Rd./ Olive St. on to Rte. 40/I-Chesterfield 64 E.		63107	0.6	12.5	151,970	0.20
28 Frwy on-ramp		Ladue Rd. on to I - 270 S.	Creve Coeur	63141	0.1	18.2	92,187	0.26
29 Frwy on-ramp		Dorsett Rd. on to I - 270 S.	Maryland Hts	63043	1.8	22.2	158,312	0.33
31 Frwy off-ramp		I - 70 W. off to Rte. 67 S.	Bridgeton	63044	0.2	7.0	11,705	0.28
32 Frwy on-ramp		Rte. 67 S. on to I - 70 W.	Bridgeton	63044	1.8	15.3	17,312	0.31
33 Frwy on-ramp		Lucas - Hunt N. on to I - 70 E.	Northwoods	63121	-1.1	14.2	15,271	0.44
34 Frwy on-ramp		Lucas - Hunt S. on to I - 70 E.	Northwoods	63121	-1.6	10.5	11,304	0.37
35 Frwy on-ramp		Richardson Rd. on to I - 55 N.	Arnold	63010	-2.5	14.4	5,787	0.30
36 Frwy on-ramp		Rte. 141 S. on to I - 55 N.	Arnold	63010	-2.8	11.9	41,371	0.28
37 Frwy on-ramp		Lindberg/Kirkwood St. on to I - 44 W.	Kirkwood	63126	2.8	19.7	48,164	0.43
39 Frwy on-ramp		Hanley Rd. on to I - 40 E.	Richmond Hts	63117	0.4	9.6	11,053	0.32
40 Frwy on-ramp		Hanley Rd. S. on to Rte. 40/I-64 W.	Richmond Hts	63117	-1.8	12.0	46,940	0.21
41 Frwy on-ramp		Hanley Rd. N. on to Rte. 40/I-64 W.	Richmond Hts	63117	-1.8	9.3	45,067	0.24
42 Frwy on-ramp		Page Rd. on to I - 170 N.	Vinita Park	63114	2.7	16.1	113,471	0.40
43 Frwy on-ramp		St. Charles Rock on to I - 170 S.	St. John	63114	1.9	16.9	54,473	0.39
44 Frwy on-ramp		Forest Park Parkway on to I - 170 N.	Clayton	63124	2	16.0	133,695	0.27
45 Frwy on-ramp		Main St. (M & K) on to I - 70 E.	O'Fallon		1.3	17.6	128,321	0.39
46 Frwy on-ramp		Salt Lick Rd. (Rte. 79) N. on to I - 70 E.	St. Peters		-0.4	11.0	17,998	0.34
47 Frwy on-ramp		Cave Springs Rd. on to I - 70 E.	St. Peters		-1.8	16.7	136,598	0.26
48 Frwy on-ramp		Zumbel Rd. on to I - 70 E.	St. Charles		-1.8	11.5	4,738	0.26
49 Frwy on-ramp		Long Rd. on to Rte. 40/I-64 E.	Chesterfield	63005	0.1	15.7	29,751	0.22
50 Frwy on-ramp		Chesterfield Rd./Airport Rd. on to Rte. 64 W.	Chesterfield	63005	2.2	13.6	20,476	0.29
51 Interchange		Rte. 141 NB on to Rte. 21 EB.	Arnold	63010	-0.2	15.8	595	0.41
52 Surface		Rte. 141 SB 1 mile S. of Olive Blvd.	Chesterfield	63017	1	10.3	17,647	0.21
53 Surface		Howdershell/Shackelford Rd. N. of Wiethaupt.	Wedgewood Grn	63031	1.3	10.5	28,368	0.22
54 Surface		Redman Rd. WB W. of Rte. 367.	Blackjack	63033	2	10.9	1,157	0.32
55 Surface		Redman Rd. EB W. of Jerries Rd.	Blackjack	63033	1.7	14.1	7,887	0.27

Appendix A1 – RapidScreen Sites cont'd

Site Ref	Type	Description	Township	Zip Code	Slope Degr	VSP kW/t	Valid Tests	Avg CO
56 Surface		Parker Rd. WB between New & Old Halls Ferry Rd.	Blackjack	63033	3.7	11.3	32,018	0.27
57 Frwy on-ramp		New Halls Ferry Rd./Dunn Rd. on to I-Blackjack 270 W.		63033	3.6	19.5	96,425	0.43
58 Surface		Old Halls Ferry Rd. NB 1 blk. N of I- 270.	Blackjack	63033	1.8	10.2	27,992	0.27
59 Frwy on-ramp		Dunn Rd./New Florissant Rd. on to I- 270 W.	Florissant	63033	2.3	16.5	65,801	0.31
61 Surface		Manchester Rd./Rte. 100 EB E. of Booneess Ln.	Wildwood	63038	0.9	16.0	407	0.30
62 Surface		Rte. 109 SB S. of Rte. 100.	Wildwood	63040	1.9	13.5	5,288	0.18
63 Frwy on-ramp		McDonnell Blvd. On to I-270 E.	Hazelwood	63042	-1	16.1	18,460	0.37
64 Frwy on-ramp		Rte. 67/Lindbergh Rd. NB on to I-270 E.	Hazelwood	63042	-0.5	11.7	3,741	0.33
65 Frwy on-ramp		Howdershell Rd./McDonnel Blvd. SB on to I-270 W.	Hazelwood	63042	-1.6	20.0	130,763	0.25
66 Surface		Creve Coeur Mill Rd. WB W. of Rose Acre Ln.	Maryland Hts	63043	-2.5	8.0	213	0.36
67 Surface		Creve Coeur Mill Rd. EB W. of Rose Acre Ln.	Maryland Hts	63043	2.5	13.7	3,550	0.34
68 Frwy on-ramp		Earth City Expressway NB on to Rte. 370 E.	Bridgeton	63044	-1	14.6	11,230	0.28
69 Surface		W. Osage St. EB between 7th St. and Highland St.	Pacific	63069	1.6	7.0	3,470	0.31
70 Frwy on-ramp		Gray Summit Rd. on to I-44 E.	Gray Summit	63069	-2.7	15.4	596	0.34
71 Frwy on-ramp		St. Charles Rock Rd. WB on to Lindberg/67 N.	St. Ann	63074	1.2	15.9	103,387	0.37
72 Surface		Cypress Rd./B NB between Int. Plaza & St. Lawrence	St. Ann	63074	-1.1	6.8	20	0.28
73 Frwy on-ramp		Rte. 47 on to I-44 E.	St. Clair	63077	-1.8	10.5	914	0.36
74 Surface		Midland Blvd. EB just E. of Ashby Rd.	Overland	63114	1.4	8.7	3,740	0.31
75 Surface		Butler Hill EB W. of I-55	N/A	63129	0.8	9.3	827	0.25
76 Frwy on-ramp		Florissant NB on to I-270 E.	Calverton Park	63135	2.3	17.4	29,979	0.38
77 Frwy on-ramp		Bellefontaine Rd. SB on to I-270 W.	Bellefontaine	63138	2.3	17.0	52,837	0.46
78 Surface		Rte. 141 NB, N. of Ladue	Town and Country	63141	2	11.6	3,153	0.17
79 Surface		Craig Rd. NB @ Debonnaire	Creve Coeur	63146	-0.5	10.1	14,654	0.19
80 Surface		McNutt Rd. WB at Commercial Blvd. (Rte. 67)	Herculaneum	63048	0.6	10.5	1,874	0.26
81 Frwy on-ramp		McNutt Rd. WB on to I - 55 N.	Herculaneum	63048	1.4	15.6	940	0.24
82 Frwy on-ramp		Rte. Z WB on to I - 55 N.	Pevely	63070	2.3	18.0	5,336	0.50
83 Surface		Old St. Rte. 21 NB on to New St. Rte. 21 NB.	Barnhart	63012	-2.5	13.0	3,486	0.28
84 Frwy on-ramp		Rte. 110 EB on to Rte. 67 N.	Olympian Village	63020	-0.9	12.9	4,760	0.38
85 Frwy on-ramp		Kingshighway SB on to I - 44 W.	N/A	63110	0.5	12.8	83,134	0.29
86 Frwy on-ramp		McKnight Rd. NB (at Delmar Blvd.) on to I - 170 N.	University City	63130	-1	7.7	33,348	0.33
87 Frwy on-ramp		Meramac Bottom Rd. on to I - 55 N.	Fenton	63129	-0.7	20.0	32,665	0.31
90 Surface		Rock Hill Rd. just W. of Laclede Station Rd.	Grantwood Village	63123	0.5	14.4	10,232	0.19
91 Surface		Green Park Rd. EB 1/2 block E. of Cedar Berry Pl.	Lakeshire	63123	3.7	11.4	8,411	0.27
Total	74				0.72	14.1	2,676,161	0.33

Appendix A2 – RapidScreen Coverage by ZIP Code

Zip Code	Description	RapidScreen		LEI	Total RS	Station Tests		Total	% RS
		RSD	Hybrid			Tests	Total		
63001		-	2	3	5	30	35	14%	
63005	CHESTERFIELD	1,037	564	788	2,389	3,295	5,684	42%	
63006		16	9	18	43	112	155	28%	
63010	ARNOLD	1,321	1,108	1,754	4,183	9,294	13,477	31%	
63011	MANCHESTER	1,159	1,108	2,390	4,657	9,664	14,321	33%	
63012	BARNHART	163	269	609	1,041	2,841	3,882	27%	
63013	BEAUFORT	2	10	47	59	1,022	1,081	5%	
63014	BERGER	1	-	12	13	432	445	3%	
63015	CATAWISSA	12	16	58	86	982	1,068	8%	
63016	CEDAR HILL	66	122	457	645	2,342	2,987	22%	
63017	TOWN AND COUNTRY	1,721	1,449	2,303	5,473	9,250	14,723	37%	
63019	CRYSTAL CITY	47	46	239	332	1,139	1,471	23%	
63020	DE SOTO	150	274	1,080	1,504	5,548	7,052	21%	
63021	BALLWIN	1,258	1,531	3,649	6,438	13,137	19,575	33%	
63022		9	8	16	33	81	114	29%	
63023	DITTMER	33	54	294	381	1,533	1,914	20%	
63025	CRESCENT	180	257	689	1,126	2,856	3,982	28%	
63026	FENTON	748	1,002	2,732	4,482	11,743	16,225	28%	
63028	FESTUS	181	259	1,368	1,808	6,599	8,407	22%	
63030	FLETCHER	1	2	9	12	51	63	19%	
63031	FLORISSANT	2,031	1,562	2,683	6,276	11,937	18,213	34%	
63032		19	18	20	57	99	156	37%	
63033	FLORISSANT	2,020	1,352	2,025	5,397	10,360	15,757	34%	
63034	FLORISSANT	826	633	1,062	2,521	3,900	6,421	39%	
63037	GERALD	4	10	78	92	1,698	1,790	5%	
63038	GLENCOE	240	211	338	789	1,361	2,150	37%	
63039	GRAY SUMMIT	9	10	29	48	619	667	7%	
63040	GROVER	318	254	385	957	1,442	2,399	40%	
63041		-	3	29	32	180	212	15%	
63042	HAZELWOOD	768	626	991	2,385	5,023	7,408	32%	
63043	MARYLAND HEIGHTS	1,344	784	1,107	3,235	5,625	8,860	37%	
63044	BRIDGETON	468	474	875	1,817	4,035	5,852	31%	
63045	BRIDGETON	29	15	26	70	191	261	27%	
63047		2	2	16	20	64	84	24%	
63048	HERCULANEUM	27	50	168	245	780	1,025	24%	
63049	HIGH RIDGE	192	251	923	1,366	4,225	5,591	24%	
63050	HILLSBORO	129	205	781	1,115	4,126	5,241	21%	
63051	HOUSE SPRINGS	111	192	722	1,025	3,953	4,978	21%	
63052	ANTONIA	497	530	1,165	2,192	5,843	8,035	27%	
63053		1	1	6	8	33	41	20%	
63055	LABADIE	16	26	88	130	1,240	1,370	9%	
63056	LESLIE	3	7	49	59	1,116	1,175	5%	
63057		2	-	9	11	13	24	46%	
63060	LONEDELL	5	15	65	85	1,306	1,391	6%	
63061	LUEBBERING	-	2	12	14	134	148	9%	
63065		2	3	17	22	45	67	33%	
63066		-	1	5	6	52	58	10%	
63068	NEW HAVEN	4	8	119	131	2,556	2,687	5%	
63069	PACIFIC	148	185	496	829	5,883	6,712	12%	
63070	PEVELY	76	88	286	450	1,590	2,040	22%	
63072	ROBERTSVILLE	11	20	81	112	1,658	1,770	6%	

Appendix A2 – RapidScreen Coverage by ZIP Code cont'd

Zip Code	Description	RapidScreen			Total RS	Station Tests		Total	% RS
		RSD	Hybrid	LEI		Tests			
63074	SAINT ANN	321	348	708	1,377	4,238	5,615	25%	
63077	SAINT CLAIR	19	51	261	331	5,718	6,049	5%	
63080	SULLIVAN	15	38	246	299	4,883	5,182	6%	
63084	UNION	27	47	377	451	7,883	8,334	5%	
63087		1	-	11	12	69	81	15%	
63088	VALLEY PARK	125	159	431	715	1,923	2,638	27%	
63089	VILLA RIDGE	30	53	167	250	3,181	3,431	7%	
63090	WASHINGTON	37	80	594	711	11,626	12,337	6%	
63101	SAINT LOUIS	37	46	50	133	539	672	20%	
63102	SAINT LOUIS	22	18	42	82	269	351	23%	
63104	SAINT LOUIS	216	285	512	1,013	3,333	4,346	23%	
63105	CLAYTON	531	451	757	1,739	3,076	4,815	36%	
63106	SAINT LOUIS	39	67	124	230	1,195	1,425	16%	
63107	SAINT LOUIS	79	77	222	378	2,160	2,538	15%	
63108	SAINT LOUIS	241	263	577	1,081	3,341	4,422	24%	
63109	SAINT LOUIS	588	770	1,503	2,861	7,502	10,363	28%	
63110	SAINT LOUIS	250	270	558	1,078	3,764	4,842	22%	
63111	SAINT LOUIS	238	264	565	1,067	4,477	5,544	19%	
63112	SAINT LOUIS	221	209	462	892	3,532	4,424	20%	
63113	SAINT LOUIS	67	90	314	471	2,405	2,876	16%	
63114	OVERLAND	819	855	1,559	3,233	10,091	13,324	24%	
63115	SAINT LOUIS	150	202	568	920	4,176	5,096	18%	
63116	SAINT LOUIS	542	686	1,895	3,123	11,287	14,410	22%	
63117	RICHMOND HEIGHTS	290	301	540	1,131	2,478	3,609	31%	
63118	SAINT LOUIS	176	226	497	899	4,648	5,547	16%	
63119	WEBSTER GROVES	937	953	2,090	3,980	8,394	12,374	32%	
63120	SAINT LOUIS	103	146	235	484	2,023	2,507	19%	
63121	NORMANDY	601	591	1,021	2,213	6,426	8,639	26%	
63122	KIRKWOOD	852	1,103	2,659	4,614	9,908	14,522	32%	
63123	AFFTON	1,267	1,380	3,192	5,839	14,088	19,927	29%	
63124	LADUE	511	445	893	1,849	3,907	5,756	32%	
63125	LEMAY	671	764	1,910	3,345	8,995	12,340	27%	
63126	SAPPINGTON	293	405	1,214	1,912	4,315	6,227	31%	
63127	SAPPINGTON	111	137	301	549	1,236	1,785	31%	
63128	SAPPINGTON	743	930	2,088	3,761	7,972	11,733	32%	
63129	SOUTH COUNTY	1,413	1,482	3,525	6,420	13,192	19,612	33%	
63130	UNIVERSITY CITY	650	704	1,343	2,697	7,113	9,810	27%	
63131	DES PERES	513	604	1,094	2,211	4,311	6,522	34%	
63132	OLIVETTE	427	413	702	1,542	3,838	5,380	29%	
63133	SAINT LOUIS	102	129	275	506	2,144	2,650	19%	
63134	BERKELEY	301	288	478	1,067	3,756	4,823	22%	
63135	FERGUSON	620	557	828	2,005	5,114	7,119	28%	
63136	JENNINGS	1,204	958	1,580	3,742	10,911	14,653	26%	
63137	NORTH COUNTY	602	485	809	1,896	4,491	6,387	30%	
63138	NORTH COUNTY	741	500	704	1,945	4,353	6,298	31%	
63139	SAINT LOUIS	481	552	1,159	2,192	6,309	8,501	26%	
63140	BERKELEY	5	5	5	15	79	94	16%	
63141	CREVE COEUR	925	766	1,162	2,853	4,800	7,653	37%	
63143	MAPLEWOOD	278	273	517	1,068	3,106	4,174	26%	
63144	BRENTWOOD	479	317	524	1,320	2,558	3,878	34%	
63145		9	4	5	18	61	79	23%	

Appendix A2 – RapidScreen Coverage by ZIP Code cont'd

Zip Code	Description	RapidScreen			Total RS	Station		% RS
		RSD	Hybrid	LEI		Tests	Total	
63146	WEST COUNTY	984	989	1,736	3,709	7,265	10,974	34%
63147	SAINT LOUIS	158	178	343	679	2,423	3,102	22%
63301	SAINT CHARLES	787	967	2,272	4,026	12,301	16,327	25%
63302		12	16	25	53	186	239	22%
63303	SAINT CHARLES	969	1,097	2,392	4,458	10,917	15,375	29%
63304	SAINT CHARLES	752	911	2,229	3,892	9,565	13,457	29%
63332	AUGUSTA	13	16	72	101	309	410	25%
63338		1	2	8	11	35	46	24%
63341	DEFIANCE	63	79	215	357	947	1,304	27%
63346		1	2	2	5	20	25	20%
63348	FORISTELL	26	54	217	297	996	1,293	23%
63365		6	7	18	31	104	135	23%
63366	SAINT PAUL	1,978	1,720	2,594	6,292	14,066	20,358	31%
63367	LAKE SAINT LOUIS	185	255	625	1,065	2,753	3,818	28%
63373	PORTAGE DES SIOU	11	14	39	64	212	276	23%
63376	SAINT PETERS	2,312	1,974	3,280	7,566	17,370	24,936	30%
63385	WENTZVILLE	191	270	774	1,235	3,844	5,079	24%
63386	WEST ALTON	10	11	26	47	174	221	21%
Total		45,786	44,937	93,891	184,614	497,719	682,333	27%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1999	ACUR	2.5TL	2	0	0	2	9	22%	
1999	ACUR	3.0 CL	12	0	0	12	51	24%	
1999	ACUR	3.2 TL	32	0	0	32	111	29%	
1999	ACUR	3.5 RL	8	0	0	8	31	26%	
1999	ACUR	INTEGRA	11	5	0	16	46	35%	
1999	AUDI	A4	7	3	0	10	45	22%	
1999	AUDI	A6	4	0	0	4	21	19%	
1999	AUDI	A8	1	0	0	1	4	25%	
1999	AUDI	QUATTRO	6	6	0	12	36	33%	
1999	BMW	323I	23	11	0	34	85	40%	
1999	BMW	323IC	5	0	0	5	22	23%	
1999	BMW	328I	18	2	0	20	60	33%	
1999	BMW	525I	3	0	0	3	4	75%	
1999	BMW	528I	20	0	0	20	84	24%	
1999	BMW	540I	1	0	0	1	16	6%	
1999	BMW	740I	14	0	0	14	44	32%	
1999	BMW	M3	4	0	0	4	17	24%	
1999	BMW	MCP	1	0	0	1	3	33%	
1999	BMW	MRD	1	0	0	1	5	20%	
1999	BMW	Z3	10	0	0	10	42	24%	
1999	BUIC	CENTURY	58	43	0	101	562	18%	
1999	BUIC	LESABRE	40	30	0	70	270	26%	
1999	BUIC	PARK AVENUE	18	16	0	34	121	28%	
1999	BUIC	REGAL	33	23	0	56	214	26%	
1999	BUIC	RIVIERA	1	0	0	1	2	50%	
1999	CADI	CATERA	2	0	0	2	27	7%	
1999	CADI	CMRCL CHASSIS	2	0	0	2	4	50%	
1999	CADI	DEVILLE	25	17	0	42	252	17%	
1999	CADI	ELDORADO	12	5	0	17	41	41%	
1999	CADI	ESC	4	0	0	4	43	9%	
1999	CADI	SEVILLE	13	8	0	21	80	26%	
1999	CHEV	5000 W5R042	1	0	0	1	1	100%	
1999	CHEV	ASTRO VAN	51	26	0	77	281	27%	
1999	CHEV	BLAZER	105	67	0	172	691	25%	
1999	CHEV	C1500	8	5	0	13	33	39%	
1999	CHEV	C2500	1	0	0	1	6	17%	
1999	CHEV	C3500	2	0	0	2	2	100%	
1999	CHEV	CAMARO	10	5	0	15	153	10%	
1999	CHEV	CAVALIER	131	91	0	222	1340	17%	
1999	CHEV	CORVETTE	6	1	0	7	103	7%	
1999	CHEV	EXPRESS	12	0	0	12	49	24%	
1999	CHEV	G10	5	0	0	5	5	100%	
1999	CHEV	G20	7	0	0	7	7	100%	
1999	CHEV	G30	15	0	0	15	15	100%	
1999	CHEV	GEO PRIZM	2	0	0	2	3	67%	
1999	CHEV	GEO TRACKER	5	0	0	5	68	7%	
1999	CHEV	K1500	47	35	0	82	408	20%	
1999	CHEV	K2500	4	0	0	4	12	33%	
1999	CHEV	K3500	1	0	0	1	1	100%	
1999	CHEV	LUMINA	91	56	0	147	650	23%	

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1999	CHEV	MALIBU	118	68	0	186		1004	19%
1999	CHEV	METRO	6	0	0	6		101	6%
1999	CHEV	MONTE CARLO	44	22	0	66		359	18%
1999	CHEV	PRIZM	11	16	0	27		169	16%
1999	CHEV	S10	70	18	0	88		503	17%
1999	CHEV	SILVERADO	131	44	0	175		814	21%
1999	CHEV	SUBURBAN	71	32	0	103		389	26%
1999	CHEV	VENTURE	53	26	0	79		316	25%
1999	CHRY	300M	30	29	0	59		247	24%
1999	CHRY	CIRRUS	20	8	0	28		131	21%
1999	CHRY	CONCORDE	35	18	0	53		193	27%
1999	CHRY	LHS	18	19	0	37		126	29%
1999	CHRY	SEBRING	35	31	0	66		299	22%
1999	CHRY	TOWN & COUNTRY	48	28	0	76		195	39%
1999	DAEW	LEGANZA	4	0	0	4		14	29%
1999	DODG	AVENGER	12	9	0	21		99	21%
1999	DODG	B150	1	0	0	1		1	100%
1999	DODG	B350	1	0	0	1		1	100%
1999	DODG	CARAVAN	213	99	0	312		1031	30%
1999	DODG	DAKOTA	68	43	0	111		527	21%
1999	DODG	DURANGO	112	65	0	177		562	31%
1999	DODG	INTREPID	94	59	0	153		573	27%
1999	DODG	NEON	49	19	0	68		388	18%
1999	DODG	RAM 1500	73	58	0	131		633	21%
1999	DODG	RAM 2500	5	0	0	5		23	22%
1999	DODG	RAM VAN	28	9	0	37		84	44%
1999	DODG	RAM WAGON	2	0	0	2		13	15%
1999	DODG	STRATUS	65	37	0	102		411	25%
1999	EGIL	Premier	5	2	0	7		7	100%
1999	FORD	AEROSTAR	7	1	0	8		10	80%
1999	FORD	CLUB WAGON	1	0	0	1		1	100%
1999	FORD	CONTOUR	40	37	0	77		658	12%
1999	FORD	CROWN VICTORIA	17	0	0	17		212	8%
1999	FORD	ECONOLINE	77	0	0	77		251	31%
1999	FORD	ESCORT	154	94	0	248		1167	21%
1999	FORD	EXPEDITION	109	43	0	152		478	32%
1999	FORD	EXPLORER	279	107	0	386		1462	26%
1999	FORD	F150	177	62	0	239		1022	23%
1999	FORD	F250	27	2	0	29		69	42%
1999	FORD	F350	3	0	0	3		5	60%
1999	FORD	MUSTANG	50	29	0	79		460	17%
1999	FORD	RANGER	110	78	0	188		1106	17%
1999	FORD	TAURUS	194	166	0	360		2150	17%
1999	FORD	WINDSTAR	120	81	0	201		860	23%
1999	GEO	TRACKER	1	0	0	1		1	100%
1999	GMC	1500	1	2	0	3		4	75%
1999	GMC	C1500	2	0	0	2		16	13%
1999	GMC	DENALI	8	7	0	15		64	23%
1999	GMC	ENVOY	7	9	0	16		23	70%
1999	GMC	JIMMY	26	11	0	37		193	19%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Total Rapid Screen %
1999	GMC	K1500	28	19	0	47	174	27%
1999	GMC	K2500	1	0	0	1	6	17%
1999	GMC	SAFARI	29	22	0	51	160	32%
1999	GMC	SAVANA	42	0	0	42	207	20%
1999	GMC	SIERRA	44	18	0	62	274	23%
1999	GMC	SONOMA	20	5	0	25	136	18%
1999	GMC	YUKON	32	17	0	49	182	27%
1999	HOND	ACCORD	199	133	0	332	825	40%
1999	HOND	CIVIC	65	36	0	101	496	20%
1999	HOND	CR-V	58	42	0	100	243	41%
1999	HOND	ODYSSEY	26	0	0	26	104	25%
1999	HOND	PASSPORT	17	3	0	20	55	36%
1999	HOND	PRELUDE	4	0	0	4	29	14%
1999	HYUN	ACCENT	2	2	0	4	38	11%
1999	HYUN	ELANTRA	20	0	0	20	101	20%
1999	HYUN	SONATA	6	0	0	6	129	5%
1999	HYUN	TIBURON	4	0	0	4	16	25%
1999	INFI	G20	19	0	0	19	92	21%
1999	INFI	I30	28	0	0	28	97	29%
1999	INFI	Q45	6	0	0	6	14	43%
1999	INFI	QX4	32	17	0	49	126	39%
1999	ISU	AMIGO	10	1	0	11	48	23%
1999	ISU	RODEO	22	19	0	41	162	25%
1999	ISU	TROOPER	12	7	0	19	81	23%
1999	ISU	VEHICROSS	1	0	0	1	6	17%
1999	JAGU	VDP	1	0	0	1	3	33%
1999	JAGU	XJ8	4	0	0	4	22	18%
1999	JAGU	XJR	1	0	0	1	8	13%
1999	JEEP	CHEROKEE	205	138	0	343	1252	27%
1999	JEEP	WRANGLER	17	21	0	38	279	14%
1999	KIA	SEPHIA	20	0	0	20	97	21%
1999	KIA	SPORTAGE	8	7	0	15	87	17%
1999	LEXS	ES 300	20	18	0	38	90	42%
1999	LEXS	GS 300	8	0	0	8	33	24%
1999	LEXS	LS 400	8	0	0	8	26	31%
1999	LEXS	LX 470	9	0	0	9	40	23%
1999	LEXS	RX 300	47	11	0	58	153	38%
1999	LEXS	SC 400	2	0	0	2	3	67%
1999	LINC		2	0	0	2	4	50%
1999	LINC	CONTINENTAL	14	0	0	14	106	13%
1999	LINC	NAVIGATOR	19	0	0	19	101	19%
1999	LINC	TOWN CAR	33	0	0	33	278	12%
1999	LNDR	DISCOVERY	5	4	0	9	28	32%
1999	LNDR	RANGE ROVER	1	0	0	1	9	11%
1999	MAZD	626	59	0	0	59	400	15%
1999	MAZD	B2500	14	0	0	14	73	19%
1999	MAZD	B3000	13	0	0	13	42	31%
1999	MAZD	B4000	2	0	0	2	14	14%
1999	MAZD	MILLENNIA	9	9	0	18	49	37%
1999	MAZD	MX5 MIATA	11	7	0	18	88	20%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Total Rapid Screen %
1999	MAZD	PROTEGE	39	0	0	39	267	15%
1999	MERC	COUGAR	31	27	0	58	346	17%
1999	MERC	GRAND MARQUIS	53	0	0	53	397	13%
1999	MERC	MOUNTAINEER	27	5	0	32	133	24%
1999	MERC	MYSTIQUE	19	0	0	19	238	8%
1999	MERC	SABLE	46	25	0	71	540	13%
1999	MERC	TRACER	9	0	0	9	132	7%
1999	MERC	VILLAGER	34	0	0	34	174	20%
1999	MERZ	230	8	0	0	8	55	15%
1999	MERZ	280	5	0	0	5	20	25%
1999	MERZ	320	13	0	0	13	77	17%
1999	MERZ	420	1	0	0	1	6	17%
1999	MERZ	500	1	0	0	1	19	5%
1999	MERZ	CLK320	6	0	0	6	22	27%
1999	MERZ	CLK430	1	0	0	1	13	8%
1999	MERZ	E430	2	0	0	2	14	14%
1999	MERZ	ML320	8	0	0	8	57	14%
1999	MERZ	ML430	1	0	0	1	27	4%
1999	MITs	3000	3	2	0	5	23	22%
1999	MITs	DIAMANTE	4	0	0	4	18	22%
1999	MITs	ECLIPSE	22	7	0	29	136	21%
1999	MITs	GALANT	18	0	0	18	145	12%
1999	MITs	MIRAGE	2	2	0	4	76	5%
1999	MITs	MONTERO	9	2	0	11	52	21%
1999	NISS	ALTIMA	115	70	0	185	604	31%
1999	NISS	FRONTIER	5	0	0	5	35	14%
1999	NISS	MAXIMA	95	48	0	143	361	40%
1999	NISS	PATHFINDER	37	22	0	59	164	36%
1999	NISS	QUEST	17	0	0	17	88	19%
1999	NISS	SENTRA	23	10	0	33	142	23%
1999	OLDS	88	23	17	0	40	136	29%
1999	OLDS	ALERO	70	23	0	93	550	17%
1999	OLDS	AURORA	9	7	0	16	56	29%
1999	OLDS	BRAVADA	7	7	0	14	72	19%
1999	OLDS	CUTLASS	26	0	0	26	209	12%
1999	OLDS	INTRIGUE	79	0	0	79	453	17%
1999	OLDS	LSS	1	1	0	2	5	40%
1999	OLDS	SILHOUETTE	25	0	0	25	141	18%
1999	PLYM	BREEZE	17	15	0	32	172	19%
1999	PLYM	GRAND VOYAGER	31	5	0	36	196	18%
1999	PLYM	NEON	26	11	0	37	204	18%
1999	PLYM	VOYAGER	42	4	0	46	178	26%
1999	PONT	2 PLUS 2	7	0	0	7	9	78%
1999	PONT	BONNEVILLE	46	26	0	72	274	26%
1999	PONT	FIREBIRD	15	9	0	24	160	15%
1999	PONT	GRAND AM	167	85	0	252	1245	20%
1999	PONT	GRAND PRIX	110	58	0	168	661	25%
1999	PONT	MONTANA	23	0	0	23	187	12%
1999	PONT	SUNFIRE	38	15	0	53	480	11%
1999	PONT	TRANS SPORT	2	0	0	2	3	67%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1999	PORS	BOXSTER	1	0	0	1	28	4%	
1999	SAA	9/5	2	0	0	2	10	20%	
1999	SAA	9/E	5	1	0	6	20	30%	
1999	SAA	900	2	1	0	3	3	100%	
1999	SAA	9-3	10	3	0	13	46	28%	
1999	SAA	93V	1	0	0	1	2	50%	
1999	STRN	SC	23	3	0	26	144	18%	
1999	STRN	SL	87	53	0	140	545	26%	
1999	STRN	SW	2	8	0	10	33	30%	
1999	SUBA	FORESTER	12	0	0	12	70	17%	
1999	SUBA	IMPREZA	2	5	0	7	31	23%	
1999	SUBA	LEGACY	18	15	0	33	116	28%	
1999	SUZI	ESTEEM	0	2	0	2	15	13%	
1999	SUZI	GRAND VITARA	2	1	0	3	7	43%	
1999	SUZI	SWIFT	0	1	0	1	1	100%	
1999	SUZI	VITARA	6	7	0	13	99	13%	
1999	TOYT	4RUNNER	37	14	0	51	160	32%	
1999	TOYT	AVALON	25	28	0	53	114	46%	
1999	TOYT	CAMRY	236	150	0	386	1110	35%	
1999	TOYT	CELICA	5	0	0	5	15	33%	
1999	TOYT	COROLLA	57	43	0	100	500	20%	
1999	TOYT	LAND CRUISER	10	1	0	11	31	35%	
1999	TOYT	RAV4	12	5	0	17	110	15%	
1999	TOYT	SIENNA	44	20	0	64	174	37%	
1999	TOYT	TACOMA	6	1	0	7	121	6%	
1999	TOYT	TERCEL	1	0	0	1	1	100%	
1999	VOLK	BEETLE	13	9	0	22	127	17%	
1999	VOLK	CABRIO	7	0	0	7	27	26%	
1999	VOLK	GOLF	2	0	0	2	21	10%	
1999	VOLK	JETTA	37	12	0	49	187	26%	
1999	VOLK	PASSAT	33	11	0	44	150	29%	
1999	VOLV	70	14	0	0	14	64	22%	
1999	VOLV	C70	1	0	0	1	20	5%	
1999	VOLV	S70	8	0	0	8	27	30%	
1999	VOLV	S80	25	9	0	34	79	43%	
1999	VOLV	V70	9	0	0	9	43	21%	
1998	ACUR	2.5TL	1	0	0	1	15	7%	
1998	ACUR	25T	3	0	0	3	43	7%	
1998	ACUR	3.0 CL	14	0	0	14	130	11%	
1998	ACUR	3.2 TL	7	0	0	7	82	9%	
1998	ACUR	3.5 RL	5	1	1	7	71	10%	
1998	ACUR	3.5RL	6	11	19	36	53	68%	
1998	ACUR	INTEGRA	17	20	75	112	204	55%	
1998	ACUR	NSX	1	0	0	1	2	50%	
1998	ACUR	SLX	1	0	0	1	15	7%	
1998	ACUR	VIGOR	2	0	0	2	7	29%	
1998	AUDI	A4	19	16	36	71	182	39%	
1998	AUDI	A6	0	2	2	4	18	22%	
1998	AUDI	A8	2	0	0	2	17	12%	
1998	AUDI	CABRIOLET	1	1	2	4	9	44%	

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total		Total Vehicles Tested	Rapid Screen %
						Total Rapid Screen	Vehicles Tested		
1998	AUDI	QUATTRO	7	12	23	42	97	43%	
1998	BMW	318I	7	3	7	17	73	23%	
1998	BMW	323IC	0	3	13	16	72	22%	
1998	BMW	323IS	2	4	3	9	40	23%	
1998	BMW	328I	19	5	23	47	153	31%	
1998	BMW	528I	26	25	54	105	247	43%	
1998	BMW	540I	5	0	0	5	40	13%	
1998	BMW	740I	18	16	45	79	222	36%	
1998	BMW	M3	9	0	0	9	75	12%	
1998	BMW	Z3	8	0	0	8	127	6%	
1998	BUIC	CENTURY	84	52	354	490	1041	47%	
1998	BUIC	LESABRE	41	53	230	324	806	40%	
1998	BUIC	PARK AVENUE	18	46	121	185	335	55%	
1998	BUIC	REGAL	45	61	143	249	458	54%	
1998	BUIC	RIVIERA	5	7	15	27	49	55%	
1998	BUIC	SKYLARK	11	18	72	101	181	56%	
1998	CADI	CATERA	13	19	42	74	196	38%	
1998	CADI	DEVILLE	32	46	115	193	721	27%	
1998	CADI	ELDORADO	5	4	25	34	107	32%	
1998	CADI	SEVILLE	15	27	43	85	247	34%	
1998	CHEV	ASTRO VAN	55	66	176	297	589	50%	
1998	CHEV	BLAZER	153	185	519	857	1800	48%	
1998	CHEV	C1500	70	0	0	70	721	10%	
1998	CHEV	C2500	15	0	0	15	60	25%	
1998	CHEV	C3500	3	0	0	3	10	30%	
1998	CHEV	CAMARO	25	35	112	172	393	44%	
1998	CHEV	CAVALIER	180	252	853	1285	2911	44%	
1998	CHEV	CORVETTE	8	8	30	46	200	23%	
1998	CHEV	EXPRESS	5	0	0	5	20	25%	
1998	CHEV	G10	3	0	0	3	53	6%	
1998	CHEV	G20	3	0	0	3	39	8%	
1998	CHEV	G30	7	0	0	7	11	64%	
1998	CHEV	GEO TRACKER	4	13	32	49	141	35%	
1998	CHEV	K1500	143	162	402	707	1710	41%	
1998	CHEV	K2500	13	0	0	13	56	23%	
1998	CHEV	LUMINA	145	167	593	905	1709	53%	
1998	CHEV	MALIBU	172	204	643	1019	2035	50%	
1998	CHEV	METRO	10	12	42	64	189	34%	
1998	CHEV	MONTE CARLO	55	60	180	295	561	53%	
1998	CHEV	PRIZM	22	29	98	149	322	46%	
1998	CHEV	S10	109	144	469	722	1726	42%	
1998	CHEV	SUBURBAN	20	21	36	77	208	37%	
1998	CHEV	VENTURE	98	69	227	394	810	49%	
1998	CHRY	CIRRUS	19	34	91	144	271	53%	
1998	CHRY	CONCORDE	23	0	0	23	421	5%	
1998	CHRY	SEBRING	103	107	368	578	1109	52%	
1998	CHRY	TOWN & COUNTRY	67	62	133	262	522	50%	
1998	DODG	AVENGER	32	40	143	215	449	48%	
1998	DODG	B350	4	0	0	4	4	100%	
1998	DODG	CARAVAN	263	282	790	1335	2509	53%	

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
1998	DODG	DAKOTA	89	97	240	426		1071	40%
1998	DODG	DURANGO	98	102	295	495		1039	48%
1998	DODG	INTREPID	69	73	242	384		783	49%
1998	DODG	NEON	76	119	458	653		1363	48%
1998	DODG	RAM 1500	128	178	494	800		1771	45%
1998	DODG	RAM 2500	11	0	0	11		55	20%
1998	DODG	RAM VAN	6	5	45	56		140	40%
1998	DODG	RAM WAGON	0	0	1	1		22	5%
1998	DODG	STRATUS	83	102	276	461		916	50%
1998	EGIL	TALON	7	6	22	35		94	37%
1998	FORD	AEROSTAR	8	15	54	77		79	97%
1998	FORD	CLUB WAGON	8	0	0	8		40	20%
1998	FORD	CONTOUR	109	146	522	777		1805	43%
1998	FORD	CROWN VICTORIA	17	19	55	91		287	32%
1998	FORD	E250	2	0	0	2		3	67%
1998	FORD	ECONOLINE	91	1	5	97		566	17%
1998	FORD	ESCORT	272	345	1121	1738		3655	48%
1998	FORD	EXPEDITION	131	121	262	514		1265	41%
1998	FORD	EXPLORER	382	394	1014	1790		3637	49%
1998	FORD	F150	222	268	692	1182		2779	43%
1998	FORD	F250	7	1	0	8		78	10%
1998	FORD	MUSTANG	92	112	354	558		1325	42%
1998	FORD	RANGER	151	195	689	1035		2354	44%
1998	FORD	TAURUS	199	264	845	1308		2750	48%
1998	FORD	WINDSTAR	247	268	811	1326		2783	48%
1998	GEO	TRACKER	0	2	4	6		6	100%
1998	GMC	C1500	5	0	0	5		14	36%
1998	GMC	ENVOY	34	49	190	273		301	91%
1998	GMC	G1500	0	1	2	3		5	60%
1998	GMC	JIMMY	8	10	29	47		334	14%
1998	GMC	K1500	15	3	16	34		127	27%
1998	GMC	SAFARI	41	41	154	236		450	52%
1998	GMC	SAVANA	31	1	4	36		321	11%
1998	GMC	SIERRA	59	20	82	161		601	27%
1998	GMC	SONOMA	56	47	154	257		664	39%
1998	GMC	YUKON	14	12	34	60		151	40%
1998	HD	MOTORCYCLE	4	5	11	20		21	95%
1998	HOND	ACCORD	251	321	814	1386		2613	53%
1998	HOND	CIVIC	171	236	726	1133		2190	52%
1998	HOND	CR-V	75	81	206	362		653	55%
1998	HOND	ODYSSEY	14	23	36	73		112	65%
1998	HOND	PASSPORT	13	23	32	68		140	49%
1998	HOND	PRELUDE	8	7	29	44		106	42%
1998	HYUN	ACCENT	11	10	45	66		148	45%
1998	HYUN	ELANTRA	16	18	64	98		212	46%
1998	HYUN	SONATA	10	5	14	29		72	40%
1998	HYUN	TIBURON	5	0	0	5		60	8%
1998	INFI	I30	32	31	63	126		290	43%
1998	INFI	Q45	8	0	0	8		65	12%
1998	INFI	QX4	27	33	68	128		290	44%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1998	ISU	AMIGO	7	3	4	14		93	15%
1998	ISU	HOMBRE	3	0	0	3		11	27%
1998	ISU	OASIS	3	0	0	3		12	25%
1998	ISU	RODEO	44	33	111	188		419	45%
1998	ISU	TROOPER	14	20	43	77		122	63%
1998	JAGU	VDP	1	0	0	1		27	4%
1998	JAGU	XJ6	1	0	0	1		1	100%
1998	JAGU	XJ8	8	0	0	8		69	12%
1998	JAGU	XJR	1	0	0	1		9	11%
1998	JAGU	XK8	5	0	0	5		42	12%
1998	JEEP	CHEROKEE	133	193	543	869		1874	46%
1998	JEEP	GRAND CHEROKEE	101	106	320	527		1232	43%
1998	JEEP	WRANGLER	15	49	244	308		755	41%
1998	KIA	SEPHIA	15	19	44	78		155	50%
1998	KIA	SPORTAGE	16	17	34	67		138	49%
1998	LEXS	ES 300	32	42	80	154		307	50%
1998	LEXS	GS 300	11	0	0	11		108	10%
1998	LEXS	GS 400	3	7	14	24		69	35%
1998	LEXS	LS 400	8	0	0	8		112	7%
1998	LEXS	LX 470	5	0	0	5		46	11%
1998	LINC	CONTINENTAL	17	33	56	106		309	34%
1998	LINC	MARK VIII	8	5	15	28		71	39%
1998	LINC	NAVIGATOR	45	39	100	184		458	40%
1998	LINC	TOWN CAR	35	44	209	288		680	42%
1998	LNDR	DISCOVERY	3	6	23	32		71	45%
1998	LNDR	RANGE ROVER	2	0	0	2		29	7%
1998	MAZD	626	97	87	259	443		1041	43%
1998	MAZD	B2500	16	14	57	87		172	51%
1998	MAZD	B3000	7	0	0	7		47	15%
1998	MAZD	MILLENNIA	14	19	40	73		141	52%
1998	MAZD	MPV WAGON	8	9	11	28		61	46%
1998	MAZD	MX5 MIATA	0	0	1	1		1	100%
1998	MAZD	PROTEGE	47	58	176	281		547	51%
1998	MERC	GRAND MARQUIS	47	92	266	405		752	54%
1998	MERC	MOUNTAINEER	48	32	82	162		415	39%
1998	MERC	MYSTIQUE	21	30	123	174		549	32%
1998	MERC	SABLE	50	66	275	391		779	50%
1998	MERC	TRACER	22	24	87	133		300	44%
1998	MERC	VILLAGER	49	52	141	242		435	56%
1998	MERZ	230	23	2	15	40		201	20%
1998	MERZ	280	9	0	0	9		46	20%
1998	MERZ	320	13	22	26	61		184	33%
1998	MERZ	420	2	0	0	2		14	14%
1998	MERZ	500	3	0	0	3		52	6%
1998	MERZ	CLK320	1	0	0	1		22	5%
1998	MERZ	E430	3	0	0	3		18	17%
1998	MERZ	ML320	21	27	60	108		240	45%
1998	MITS	3000	3	1	2	6		40	15%
1998	MITS	DIAMANTE	10	12	14	36		74	49%
1998	MITS	ECLIPSE	27	36	112	175		445	39%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total		Total Vehicles Tested	Rapid Screen %
						Total Screen	Rapid Screen		
1998	MITS	GALANT	14	12	28	54	125	43%	
1998	MITS	MIRAGE	8	7	14	29	73	40%	
1998	MITS	MONTERO	10	6	40	56	183	31%	
1998	NISS	200SX	10	3	20	33	65	51%	
1998	NISS	240SX	1	1	2	4	8	50%	
1998	NISS	ALTIMA	77	95	271	443	1002	44%	
1998	NISS	FRONTIER	12	7	41	60	120	50%	
1998	NISS	MAXIMA	98	70	183	351	775	45%	
1998	NISS	PATHFINDER	69	57	109	235	413	57%	
1998	NISS	QUEST	5	0	0	5	75	7%	
1998	NISS	SENTRA	35	38	95	168	357	47%	
1998	OLDS	88	34	62	167	263	479	55%	
1998	OLDS	98	1	0	0	1	1	100%	
1998	OLDS	ACHIEVA	18	22	94	134	240	56%	
1998	OLDS	AURORA	29	18	20	67	232	29%	
1998	OLDS	BRAVADA	21	29	74	124	293	42%	
1998	OLDS	CUTLASS	35	36	127	198	542	37%	
1998	OLDS	INTRIGUE	103	117	308	528	962	55%	
1998	OLDS	LSS	4	6	14	24	46	52%	
1998	OLDS	REGENCY	7	0	0	7	62	11%	
1998	OLDS	SILHOUETTE	39	48	117	204	371	55%	
1998	OTHER	OTHER	3	1	3	7	12	58%	
1998	PLYM	BREEZE	50	36	135	221	487	45%	
1998	PLYM	GRAND VOYAGER	72	35	121	228	447	51%	
1998	PLYM	NEON	57	75	158	290	871	33%	
1998	PLYM	VOYAGER	69	36	109	214	672	32%	
1998	PONT	BONNEVILLE	60	64	168	292	565	52%	
1998	PONT	FIREBIRD	21	20	81	122	303	40%	
1998	PONT	GRAND AM	62	71	195	328	819	40%	
1998	PONT	GRAND PRIX	124	123	322	569	1273	45%	
1998	PONT	SUNFIRE	68	66	236	370	1014	36%	
1998	PONT	TRANS SPORT	47	55	121	223	467	48%	
1998	PORS	911	0	0	7	7	14	50%	
1998	PORS	BOXSTER	3	0	0	3	33	9%	
1998	SAA	900	5	3	9	17	46	37%	
1998	SAA	9000	1	0	1	2	5	40%	
1998	STRN	LS	5	8	29	42	45	93%	
1998	STRN	SC	33	56	154	243	492	49%	
1998	STRN	SL	92	153	574	819	1522	54%	
1998	STRN	SW	5	18	56	79	148	53%	
1998	SUBA	FORESTER	15	28	60	103	185	56%	
1998	SUBA	IMPREZA	5	6	25	36	68	53%	
1998	SUBA	LEGACY	19	37	86	142	272	52%	
1998	SUZI	ESTEEM	2	1	6	9	41	22%	
1998	SUZI	SIDEKICK	3	12	51	66	136	49%	
1998	TOYT	4RUNNER	34	52	109	195	436	45%	
1998	TOYT	AVALON	46	59	115	220	492	45%	
1998	TOYT	CAMRY	230	268	884	1382	2589	53%	
1998	TOYT	COROLLA	78	110	269	457	1173	39%	
1998	TOYT	LAND CRUISER	3	0	0	3	33	9%	

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Rapid Screen %
1998	TOYT	RAV4	20	15	57	92	298	31%
1998	TOYT	SIENNA	66	62	142	270	486	56%
1998	TOYT	T100	1	0	6	7	20	35%
1998	TOYT	TACOMA	18	28	81	127	285	45%
1998	VOLK	BEETLE	13	17	66	96	179	54%
1998	VOLK	CABRIO	9	5	9	23	91	25%
1998	VOLK	GOLF	3	5	21	29	66	44%
1998	VOLK	GTI	3	4	3	10	39	26%
1998	VOLK	JETTA	30	42	85	157	369	43%
1998	VOLK	PASSAT	10	16	43	69	207	33%
1998	VOLV	70	46	48	80	174	502	35%
1998	VOLV	850	1	4	2	7	7	100%
1998	VOLV	90	9	0	0	9	81	11%
1998	VOLV	C70	1	0	0	1	14	7%
1998	VOLV	S70	21	19	44	84	179	47%
1998	VOLV	V70	20	24	56	100	169	59%
1998	VOLV	V70R	1	0	3	4	7	57%
1997	ACUR	2.5TL	8	6	0	14	31	45%
1997	ACUR	25T	4	0	0	4	27	15%
1997	ACUR	3.0 CL	14	14	0	28	129	22%
1997	ACUR	3.2 TL	3	0	0	3	45	7%
1997	ACUR	3.5 RL	8	3	0	11	78	14%
1997	ACUR	INTEGRA	5	10	0	15	107	14%
1997	ACUR	SE	1	0	0	1	2	50%
1997	ACUR	SLX	1	0	0	1	10	10%
1997	AUDI	A4	4	1	0	5	63	8%
1997	AUDI	A8	0	1	0	1	4	25%
1997	AUDI	QUATTRO	2	2	0	4	25	16%
1997	BMW	318I	3	3	0	6	55	11%
1997	BMW	328I	9	1	0	10	112	9%
1997	BMW	528I	13	11	0	24	138	17%
1997	BMW	540I	1	2	0	3	37	8%
1997	BMW	740I	6	4	0	10	44	23%
1997	BMW	840CI	1	0	0	1	2	50%
1997	BMW	M3	3	0	0	3	26	12%
1997	BMW	Z3	6	4	0	10	69	14%
1997	BUIC	CENTURY	21	10	0	31	186	17%
1997	BUIC	LESABRE	58	60	0	118	511	23%
1997	BUIC	PARK AVENUE	33	16	0	49	210	23%
1997	BUIC	REGAL	6	3	0	9	70	13%
1997	BUIC	RIVIERA	4	5	0	9	57	16%
1997	BUIC	SKYLARK	29	25	0	54	196	28%
1997	CADI	CATERA	8	3	0	11	167	7%
1997	CADI	CMRCL CHASSIS	1	0	0	1	2	50%
1997	CADI	DEVILLE	28	33	0	61	370	16%
1997	CADI	ELDORADO	4	6	0	10	85	12%
1997	CADI	SEVILLE	15	12	0	27	201	13%
1997	CHEV	ASTRO VAN	47	51	0	98	312	31%
1997	CHEV	BLAZER	88	55	0	143	812	18%
1997	CHEV	C1500	52	7	0	59	409	14%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Rapid Screen %
1997	CHEV	C2500	5	0	0	5	17	29%
1997	CHEV	C3500	3	0	0	3	4	75%
1997	CHEV	CAMARO	10	19	0	29	195	15%
1997	CHEV	CAVALIER	192	147	0	339	1579	21%
1997	CHEV	CORVETTE	0	1	0	1	26	4%
1997	CHEV	EXPRESS	2	0	0	2	7	29%
1997	CHEV	G10	2	0	0	2	37	5%
1997	CHEV	G20	2	0	0	2	16	13%
1997	CHEV	G30	6	0	0	6	7	86%
1997	CHEV	K1500	90	60	0	150	827	18%
1997	CHEV	K2500	6	0	0	6	17	35%
1997	CHEV	K3500	1	0	0	1	2	50%
1997	CHEV	LUMINA	157	98	0	255	1017	25%
1997	CHEV	MALIBU	60	48	0	108	504	21%
1997	CHEV	MONTE CARLO	45	19	0	64	257	25%
1997	CHEV	PRIZM	0	1	0	1	1	100%
1997	CHEV	S10	60	45	0	105	545	19%
1997	CHEV	SUBURBAN	19	12	0	31	205	15%
1997	CHEV	VENTURE	34	19	0	53	198	27%
1997	CHRY	CIRRUS	18	11	0	29	124	23%
1997	CHRY	CONCORDE	28	11	0	39	208	19%
1997	CHRY	LHS	20	18	0	38	127	30%
1997	CHRY	SEBRING	66	53	0	119	493	24%
1997	CHRY	TOWN & COUNTRY	46	27	0	73	276	26%
1997	DODG	AVENGER	29	20	0	49	206	24%
1997	DODG	B250	4	0	0	4	4	100%
1997	DODG	B350	4	0	0	4	4	100%
1997	DODG	CARAVAN	179	112	0	291	982	30%
1997	DODG	DAKOTA	50	14	0	64	469	14%
1997	DODG	INTREPID	99	69	0	168	678	25%
1997	DODG	NEON	46	45	0	91	532	17%
1997	DODG	RAM 1500	99	91	0	190	935	20%
1997	DODG	RAM 2500	3	0	0	3	10	30%
1997	DODG	RAM VAN	25	10	0	35	131	27%
1997	DODG	RAM WAGON	3	0	0	3	15	20%
1997	DODG	STRATUS	57	49	0	106	396	27%
1997	EGIL	TALON	10	3	0	13	84	15%
1997	EGIL	VISION	6	4	0	10	35	29%
1997	FORD	AEROSTAR	23	19	0	42	152	28%
1997	FORD	ASPIRE	12	12	0	24	114	21%
1997	FORD	CLUB WAGON	3	0	0	3	25	12%
1997	FORD	CONTOUR	27	29	0	56	261	21%
1997	FORD	CROWN VICTORIA	19	22	0	41	229	18%
1997	FORD	ECONOLINE	43	9	0	52	233	22%
1997	FORD	ESCORT	141	112	0	253	1163	22%
1997	FORD	EXPEDITION	94	51	0	145	547	27%
1997	FORD	EXPLORER	197	124	0	321	1242	26%
1997	FORD	F100	2	0	0	2	2	100%
1997	FORD	F150	225	173	0	398	1808	22%
1997	FORD	F250	23	1	0	24	90	27%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Total Rapid Screen %
1997	FORD	MUSTANG	17	13	0	30	288	10%
1997	FORD	PROBE	7	10	0	17	83	20%
1997	FORD	RANGER	86	70	0	156	783	20%
1997	FORD	TAURUS	135	114	0	249	1463	17%
1997	FORD	THUNDERBIRD	26	17	0	43	169	25%
1997	FORD	WINDSTAR	29	18	0	47	135	35%
1997	GEO	METRO	5	11	0	16	199	8%
1997	GEO	PRIZM	25	17	0	42	186	23%
1997	GEO	TRACKER	2	1	0	3	45	7%
1997	GMC	C1500	5	0	0	5	24	21%
1997	GMC	JIMMY	34	22	0	56	296	19%
1997	GMC	K1500	15	4	0	19	155	12%
1997	GMC	SAFARI	32	16	0	48	235	20%
1997	GMC	SAVANA	16	0	0	16	111	14%
1997	GMC	SIERRA	42	10	0	52	386	13%
1997	GMC	SONOMA	19	7	0	26	175	15%
1997	GMC	YUKON	21	12	0	33	149	22%
1997	HOND	ACCORD	158	80	0	238	906	26%
1997	HOND	CIVIC	70	60	0	130	713	18%
1997	HOND	CR-V	22	26	0	48	165	29%
1997	HOND	ODYSSEY	12	15	0	27	70	39%
1997	HOND	PASSPORT	7	2	0	9	51	18%
1997	HOND	PRELUDE	3	1	0	4	70	6%
1997	HYUN	ACCENT	3	6	0	9	57	16%
1997	HYUN	ELANTRA	12	8	0	20	121	17%
1997	HYUN	SONATA	6	5	0	11	41	27%
1997	HYUN	TIBURON	5	2	0	7	81	9%
1997	INFI	I30	24	13	0	37	267	14%
1997	INFI	J30	3	4	0	7	46	15%
1997	INFI	Q45	6	0	0	6	71	8%
1997	INFI	QX4	7	8	0	15	169	9%
1997	ISU	HOMBRE	1	0	0	1	7	14%
1997	ISU	OASIS	1	0	0	1	4	25%
1997	ISU	RODEO	11	8	0	19	107	18%
1997	ISU	TROOPER	0	1	0	1	14	7%
1997	JAGU	VDP	0	1	0	1	11	9%
1997	JAGU	XJ6	4	5	0	9	59	15%
1997	JAGU	XK8	5	0	0	5	29	17%
1997	JEEP	CHEROKEE	91	56	0	147	707	21%
1997	JEEP	GRAND CHEROKEE	62	35	0	97	566	17%
1997	JEEP	WRANGLER	12	28	0	40	469	9%
1997	KIA	SEPHIA	1	0	0	1	8	13%
1997	LEXS	ES 300	21	15	0	36	228	16%
1997	LEXS	LS 400	6	7	0	13	56	23%
1997	LEXS	LS 450	5	2	0	7	42	17%
1997	LINC	CONTINENTAL	15	0	0	15	118	13%
1997	LINC	MARK VIII	6	0	0	6	49	12%
1997	LINC	TOWN CAR	36	25	0	61	312	20%
1997	LNDR	DISCOVERY	1	2	0	3	60	5%
1997	LNDR	RANGE ROVER	2	0	0	2	14	14%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Rapid Screen %
1997	MAZD	626	42	31	0	73	477	15%
1997	MAZD	B2300	7	3	0	10	74	14%
1997	MAZD	B4000	5	0	0	5	19	26%
1997	MAZD	MILLENNIA	4	4	0	8	64	13%
1997	MAZD	MPV WAGON	4	2	0	6	36	17%
1997	MAZD	MX5 MIATA	1	2	0	3	70	4%
1997	MAZD	PROTEGE	42	27	0	69	233	30%
1997	MERC	COUGAR	16	20	0	36	132	27%
1997	MERC	GRAND MARQUIS	60	53	0	113	509	22%
1997	MERC	MOUNTAINEER	45	19	0	64	222	29%
1997	MERC	MYSTIQUE	2	1	0	3	65	5%
1997	MERC	SABLE	50	49	0	99	401	25%
1997	MERC	TRACER	35	20	0	55	182	30%
1997	MERC	VILLAGER	43	30	0	73	247	30%
1997	MERZ	230	3	0	0	3	51	6%
1997	MERZ	280	5	2	0	7	30	23%
1997	MERZ	320	12	5	0	17	98	17%
1997	MERZ	420	5	2	0	7	48	15%
1997	MERZ	500	1	0	0	1	30	3%
1997	MITS	3000	2	0	0	2	30	7%
1997	MITS	DIAMANTE	6	1	0	7	91	8%
1997	MITS	ECLIPSE	28	16	0	44	304	14%
1997	MITS	GALANT	22	11	0	33	224	15%
1997	MITS	MIRAGE	3	7	0	10	74	14%
1997	MITS	MONTERO	7	1	0	8	126	6%
1997	NISS	200SX	4	2	0	6	55	11%
1997	NISS	240SX	0	1	0	1	9	11%
1997	NISS	ALTIMA	70	47	0	117	729	16%
1997	NISS	KING CAB	2	0	0	2	19	11%
1997	NISS	MAXIMA	59	40	0	99	500	20%
1997	NISS	PATHFINDER	9	14	0	23	295	8%
1997	NISS	QUEST	13	7	0	20	87	23%
1997	NISS	SENTRA	18	18	0	36	197	18%
1997	NISS	STANDARD	2	2	0	4	43	9%
1997	OLDS	88	26	24	0	50	195	26%
1997	OLDS	ACHIEVA	17	16	0	33	178	19%
1997	OLDS	AURORA	5	8	0	13	148	9%
1997	OLDS	BRAVADA	15	12	0	27	121	22%
1997	OLDS	CUTLASS	50	28	0	78	325	24%
1997	OLDS	LSS	11	2	0	13	40	33%
1997	OLDS	REGENCY	6	0	0	6	27	22%
1997	OLDS	SILHOUETTE	28	6	0	34	112	30%
1997	PLYM	BREEZE	29	16	0	45	333	14%
1997	PLYM	NEON	41	35	0	76	391	19%
1997	PLYM	VOYAGER	94	60	0	154	482	32%
1997	PONT	BONNEVILLE	49	37	0	86	317	27%
1997	PONT	FIREBIRD	14	15	0	29	166	17%
1997	PONT	GRAND AM	116	79	0	195	961	20%
1997	PONT	GRAND PRIX	129	73	0	202	741	27%
1997	PONT	SUNFIRE	81	31	0	112	568	20%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Rapid Screen %
1997	PONT	TRANS SPORT	17	13	0	30	133	23%
1997	PORS	BOXSTER	1	0	0	1	13	8%
1997	SAA	900	9	4	0	13	64	20%
1997	SAA	9000	1	0	0	1	7	14%
1997	STRN	SC	52	29	0	81	391	21%
1997	STRN	SL	118	88	0	206	920	22%
1997	STRN	SW	10	7	0	17	95	18%
1997	SUBA		0	1	0	1	3	33%
1997	SUBA	IMPREZA	3	0	0	3	29	10%
1997	SUBA	LEGACY	8	18	0	26	125	21%
1997	SUZI	ESTEEM	0	1	0	1	5	20%
1997	SUZI	SIDEKICK	3	5	0	8	51	16%
1997	TOYT	4RUNNER	27	13	0	40	217	18%
1997	TOYT	AVALON	36	26	0	62	209	30%
1997	TOYT	CAMRY	172	133	0	305	1250	24%
1997	TOYT	CELICA	4	0	0	4	50	8%
1997	TOYT	COROLLA	61	39	0	100	540	19%
1997	TOYT	LAND CRUISER	3	3	0	6	43	14%
1997	TOYT	PASEO	1	0	0	1	14	7%
1997	TOYT	PREVIA	2	0	0	2	9	22%
1997	TOYT	RAV4	24	14	0	38	171	22%
1997	TOYT	T100	4	0	0	4	28	14%
1997	TOYT	TACOMA	10	8	0	18	131	14%
1997	TOYT	TERCEL	11	2	0	13	85	15%
1997	VOLK	CABRIO	4	0	0	4	29	14%
1997	VOLK	GOLF	5	0	0	5	39	13%
1997	VOLK	GTI	3	0	0	3	15	20%
1997	VOLK	JETTA	23	19	0	42	233	18%
1997	VOLK	PASSAT	2	2	0	4	25	16%
1997	VOLV	850	23	12	0	35	148	24%
1997	VOLV	960	6	0	0	6	52	12%
1997	VOLV	V70	1	0	0	1	1	100%
1996	ACUR	25T	11	10	48	69	143	48%
1996	ACUR	3.2 TL	8	13	20	41	98	42%
1996	ACUR	3.5 RL	11	9	23	43	134	32%
1996	ACUR	INTEGRA	17	37	106	160	293	55%
1996	ACUR	SLX	1	0	0	1	14	7%
1996	AUDI	A4	1	4	20	25	56	45%
1996	AUDI	A6	1	4	4	9	23	39%
1996	AUDI	CABRIOLET	0	2	2	4	9	44%
1996	AUDI	QUATTRO	6	10	18	34	75	45%
1996	BMW	318I	5	5	18	28	77	36%
1996	BMW	328I	20	17	36	73	152	48%
1996	BMW	740I	5	2	8	15	27	56%
1996	BMW	750IL	1	0	0	1	6	17%
1996	BMW	Z3	1	6	33	40	72	56%
1996	BUIC	CENTURY	33	77	288	398	774	51%
1996	BUIC	LESABRE	7	24	84	115	247	47%
1996	BUIC	PARK AVENUE	17	29	121	167	292	57%
1996	BUIC	REGAL	37	57	227	321	656	49%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total	
							Vehicles Tested	Rapid Screen %
1996	BUIC	RIVIERA	11	10	29	50	114	44%
1996	BUIC	ROADMASTER	8	14	58	80	170	47%
1996	BUIC	SKYLARK	41	51	165	257	439	59%
1996	CADI	CMRCL CHASSIS	1	0	1	2	10	20%
1996	CADI	DEVILLE	34	92	130	256	762	34%
1996	CADI	ELDORADO	6	3	14	23	94	24%
1996	CADI	FLEETWOOD	2	8	23	33	89	37%
1996	CADI	SEVILLE	13	34	36	83	256	32%
1996	CHEV	ASTRO VAN	45	42	108	195	400	49%
1996	CHEV	BERETTA	34	41	172	247	531	47%
1996	CHEV	BLAZER	129	167	459	755	1598	47%
1996	CHEV	C10	6	8	23	37	37	100%
1996	CHEV	C1500	54	14	56	124	682	18%
1996	CHEV	C20	1	0	0	1	1	100%
1996	CHEV	C2500	8	0	0	8	40	20%
1996	CHEV	C3500	2	0	0	2	6	33%
1996	CHEV	CAMARO	19	28	107	154	413	37%
1996	CHEV	CAPRICE	26	49	159	234	443	53%
1996	CHEV	CAVALIER	150	228	681	1059	2515	42%
1996	CHEV	CORSICA	117	171	362	650	1860	35%
1996	CHEV	CORVETTE	6	7	26	39	174	22%
1996	CHEV	G10	2	0	0	2	91	2%
1996	CHEV	G20	1	0	0	1	13	8%
1996	CHEV	G30	4	0	0	4	19	21%
1996	CHEV	K1500	87	105	364	556	1247	45%
1996	CHEV	K2500	3	0	0	3	22	14%
1996	CHEV	K3500	3	0	0	3	5	60%
1996	CHEV	LUMINA	190	222	492	904	2063	44%
1996	CHEV	METRO	1	1	8	10	11	91%
1996	CHEV	MONTE CARLO	51	65	196	312	617	51%
1996	CHEV	PRIZM	2	4	2	8	8	100%
1996	CHEV	S10	61	110	283	454	1175	39%
1996	CHEV	SUBURBAN	22	25	72	119	312	38%
1996	CHEV	TRACKER	0	0	8	8	10	80%
1996	CHEV	VENTURE	1	1	7	9	9	100%
1996	CHRY	CIRRUS	37	51	136	224	453	49%
1996	CHRY	CONCORDE	27	65	132	224	486	46%
1996	CHRY	INTREPID	1	0	0	1	7	14%
1996	CHRY	LHS	23	33	115	171	337	51%
1996	CHRY	NEW YORKER	3	0	11	14	27	52%
1996	CHRY	SEBRING	72	113	273	458	992	46%
1996	CHRY	TOWN & COUNTRY	103	110	263	476	896	53%
1996	DODG	AVENGER	24	45	174	243	524	46%
1996	DODG	B250	3	7	18	28	28	100%
1996	DODG	B350	3	0	0	3	3	100%
1996	DODG	CARAVAN	223	267	950	1440	2574	56%
1996	DODG	DAKOTA	39	20	71	130	602	22%
1996	DODG	INTREPID	144	152	407	703	1495	47%
1996	DODG	NEON	73	118	330	521	1186	44%
1996	DODG	RAM 1500	95	114	451	660	1625	41%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Rapid Screen %
1996	DODG	RAM 2500	4	0	5	9	54	17%
1996	DODG	RAM VAN	21	29	40	90	259	35%
1996	DODG	RAM WAGON	3	3	9	15	49	31%
1996	DODG	SHADOW	0	1	0	1	1	100%
1996	DODG	STEALTH	0	0	1	1	5	20%
1996	DODG	STRATUS	65	72	260	397	835	48%
1996	EGIL	SUMMIT	0	0	1	1	3	33%
1996	EGIL	TALON	10	2	9	21	144	15%
1996	EGIL	VISION	14	28	25	67	174	39%
1996	FORD	AEROSTAR	22	41	407	470	689	68%
1996	FORD	ASPIRE	14	20	86	120	227	53%
1996	FORD	BRONCO	10	16	33	59	172	34%
1996	FORD	CLUB WAGON	4	1	12	17	38	45%
1996	FORD	CONTOUR	65	110	404	579	1252	46%
1996	FORD	CROWN VICTORIA	18	33	125	176	538	33%
1996	FORD	ECONOLINE	58	73	176	307	583	53%
1996	FORD	ESCORT	79	108	365	552	1258	44%
1996	FORD	EXPLORER	205	267	713	1185	2425	49%
1996	FORD	F100	3	5	13	21	22	95%
1996	FORD	F150	122	172	506	800	1559	51%
1996	FORD	F250	7	1	1	9	81	11%
1996	FORD	F350	2	0	0	2	5	40%
1996	FORD	MUSTANG	54	61	216	331	854	39%
1996	FORD	PROBE	25	38	130	193	428	45%
1996	FORD	RANGER	72	128	611	811	1766	46%
1996	FORD	TAURUS	158	256	876	1290	2930	44%
1996	FORD	THUNDERBIRD	33	59	229	321	600	54%
1996	FORD	WINDSTAR	154	202	498	854	1812	47%
1996	GEO	METRO	19	40	188	247	585	42%
1996	GEO	PRIZM	28	36	162	226	439	51%
1996	GEO	TRACKER	8	16	87	111	338	33%
1996	GMC	1500	2	0	5	7	14	50%
1996	GMC	C1500	4	1	3	8	30	27%
1996	GMC	JIMMY	50	65	160	275	623	44%
1996	GMC	K1500	10	23	50	83	170	49%
1996	GMC	K2500	1	0	0	1	12	8%
1996	GMC	S TRUCK	0	2	10	12	13	92%
1996	GMC	SAFARI	41	46	137	224	454	49%
1996	GMC	SAVANA	39	31	141	211	496	43%
1996	GMC	SIERRA	50	31	76	157	614	26%
1996	GMC	SONOMA	23	35	95	153	500	31%
1996	GMC	VANDURA	1	0	0	1	2	50%
1996	GMC	YUKON	11	14	47	72	194	37%
1996	HOND	ACCORD	208	226	623	1057	2152	49%
1996	HOND	CIVIC	65	110	357	532	1090	49%
1996	HOND	ODYSSEY	14	21	51	86	137	63%
1996	HOND	PASSPORT	10	12	29	51	98	52%
1996	HOND	PRELUDE	2	9	35	46	81	57%
1996	HYUN	ACCENT	10	11	51	72	193	37%
1996	HYUN	ELANTRA	4	7	40	51	115	44%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1996	HYUN	SONATA	4	7	8	19	40	48%	
1996	INFI	G20	15	15	25	55	119	46%	
1996	INFI	I30	28	43	91	162	305	53%	
1996	INFI	J30	4	2	4	10	34	29%	
1996	INFI	Q45	1	3	4	8	20	40%	
1996	ISU	HOMBRE	2	1	7	10	23	43%	
1996	ISU	OASIS	3	0	0	3	22	14%	
1996	ISU	RODEO	35	11	55	101	184	55%	
1996	ISU	TROOPER	4	7	26	37	76	49%	
1996	JAGU	VDP	0	7	12	19	42	45%	
1996	JAGU	XJ12	2	0	0	2	7	29%	
1996	JAGU	XJ6	6	7	25	38	68	56%	
1996	JAGU	XJ8	0	1	3	4	4	100%	
1996	JAGU	XJR	0	1	0	1	3	33%	
1996	JAGU	XJS	1	3	2	6	23	26%	
1996	JEEP	CHEROKEE	246	259	760	1265	3292	38%	
1996	KIA	SPORTAGE	0	0	1	1	3	33%	
1996	LEXS	ES 300	35	35	81	151	295	51%	
1996	LEXS	GS 300	1	0	0	1	11	9%	
1996	LEXS	LS 400	10	14	24	48	101	48%	
1996	LEXS	LS 450	5	0	0	5	30	17%	
1996	LINC	CONTINENTAL	15	19	60	94	196	48%	
1996	LINC	MARK VIII	6	11	22	39	91	43%	
1996	LINC	TOWN CAR	43	49	239	331	645	51%	
1996	LNDR	DISCOVERY	4	11	24	39	95	41%	
1996	LNDR	RANGE ROVER	1	2	4	7	24	29%	
1996	MAZD	626	62	80	246	388	740	52%	
1996	MAZD	B2300	5	10	54	69	127	54%	
1996	MAZD	B3000	3	2	12	17	44	39%	
1996	MAZD	B4000	2	0	13	15	35	43%	
1996	MAZD	MILLENNIA	4	6	34	44	81	54%	
1996	MAZD	MPV WAGON	9	10	18	37	57	65%	
1996	MAZD	MX5 MIATA	7	11	38	56	108	52%	
1996	MAZD	MX-6	6	3	21	30	71	42%	
1996	MAZD	PROTEGE	31	52	194	277	517	54%	
1996	MERC	COUGAR	21	39	135	195	353	55%	
1996	MERC	GRAND MARQUIS	43	94	375	512	1000	51%	
1996	MERC	MYSTIQUE	21	29	121	171	398	43%	
1996	MERC	SABLE	53	102	310	465	992	47%	
1996	MERC	TRACER	4	3	25	32	74	43%	
1996	MERC	VILLAGER	56	77	205	338	617	55%	
1996	MERZ	220	4	7	21	32	55	58%	
1996	MERZ	280	2	3	13	18	43	42%	
1996	MERZ	320	2	8	26	36	107	34%	
1996	MERZ	420	1	0	0	1	8	13%	
1996	MERZ	500	0	0	4	4	23	17%	
1996	MITS	3000	4	3	5	12	40	30%	
1996	MITS	ECLIPSE	14	26	66	106	322	33%	
1996	MITS	GALANT	23	23	47	93	235	40%	
1996	MITS	MIRAGE	3	1	9	13	57	23%	

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Screen		
1996	MITS	MONTERO	4	8	9	21		54	39%
1996	NISS	200SX	9	9	22	40		100	40%
1996	NISS	240SX	1	4	4	9		24	38%
1996	NISS	300ZX	0	2	3	5		16	31%
1996	NISS	ALTIMA	57	78	150	285		597	48%
1996	NISS	KING CAB	5	7	22	34		63	54%
1996	NISS	MAXIMA	133	124	329	586		1048	56%
1996	NISS	PATHFINDER	15	17	71	103		216	48%
1996	NISS	QUEST	5	13	27	45		100	45%
1996	NISS	SENTRA	52	52	139	243		549	44%
1996	NISS	STANDARD	5	10	18	33		70	47%
1996	OLDS	88	28	43	138	209		394	53%
1996	OLDS	98	4	8	28	40		90	44%
1996	OLDS	ACHIEVA	32	36	111	179		373	48%
1996	OLDS	ALERO	0	1	0	1		1	100%
1996	OLDS	AURORA	19	23	23	65		198	33%
1996	OLDS	BRAVADA	9	11	34	54		106	51%
1996	OLDS	CIERA	56	106	475	637		1188	54%
1996	OLDS	CUTLASS	40	64	176	280		546	51%
1996	OLDS	LSS	10	9	36	55		118	47%
1996	OLDS	SILHOUETTE	1	0	0	1		34	3%
1996	PLYM	BREEZE	34	40	128	202		461	44%
1996	PLYM	NEON	57	77	262	396		932	42%
1996	PLYM	VALIANT	1	2	3	6		7	86%
1996	PLYM	VOYAGER	108	135	436	679		1245	55%
1996	PONT	BONNEVILLE	50	69	242	361		647	56%
1996	PONT	FIREBIRD	16	23	60	99		283	35%
1996	PONT	GRAND AM	119	117	551	787		1622	49%
1996	PONT	GRAND PRIX	54	81	272	407		783	52%
1996	PONT	SUNFIRE	57	57	147	261		878	30%
1996	PONT	TRANS SPORT	8	11	23	42		82	51%
1996	PORS	911	0	1	7	8		26	31%
1996	SAA	900	11	7	25	43		89	48%
1996	SAA	9000	4	4	5	13		19	68%
1996	STRN	SC	38	54	162	254		537	47%
1996	STRN	SL	127	203	612	942		1921	49%
1996	STRN	SW	12	13	50	75		158	47%
1996	SUBA		1	1	1	3		5	60%
1996	SUBA	IMPREZA	0	3	12	15		38	39%
1996	SUBA	LEGACY	5	30	77	112		234	48%
1996	SUZI	ESTEEM	1	0	2	3		8	38%
1996	SUZI	SIDEKICK	1	3	32	36		85	42%
1996	SUZI	X90	1	0	5	6		20	30%
1996	TOYT	4RUNNER	22	22	41	85		179	47%
1996	TOYT	AVALON	36	40	133	209		412	51%
1996	TOYT	CAMRY	203	239	678	1120		2177	51%
1996	TOYT	CELICA	10	0	0	10		71	14%
1996	TOYT	COROLLA	99	125	356	580		1192	49%
1996	TOYT	LAND CRUISER	4	5	16	25		62	40%
1996	TOYT	PASEO	1	3	14	18		43	42%

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Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Total Rapid Screen %
1996	TOYT	PREVIA	3	1	5	9	30	30%
1996	TOYT	RAV4	8	25	49	82	166	49%
1996	TOYT	T100	7	8	9	24	65	37%
1996	TOYT	TACOMA	14	15	59	88	233	38%
1996	TOYT	TERCEL	5	15	73	93	196	47%
1996	VOLK	CABRIO	4	3	7	14	34	41%
1996	VOLK	GOLF	2	6	22	30	73	41%
1996	VOLK	GTI	0	1	11	12	23	52%
1996	VOLK	JETTA	20	32	97	149	381	39%
1996	VOLK	PASSAT	10	5	4	19	62	31%
1996	VOLV	850	47	34	64	145	467	31%
1996	VOLV	960	11	0	0	11	103	11%
1995	ACUR	INTEGRA	17	17	0	34	154	22%
1995	ACUR	LEGEND	10	5	0	15	53	28%
1995	AUDI	90	2	0	0	2	8	25%
1995	AUDI	A6	2	0	0	2	6	33%
1995	AUDI	QUATTRO	2	1	0	3	16	19%
1995	BMW	318I	4	6	0	10	67	15%
1995	BMW	318IC	0	1	0	1	7	14%
1995	BMW	325I	5	11	0	16	76	21%
1995	BMW	525I	11	6	0	17	63	27%
1995	BMW	530I	3	0	0	3	19	16%
1995	BMW	540I	1	0	0	1	6	17%
1995	BMW	740I	7	4	0	11	56	20%
1995	BMW	M3	1	1	0	2	25	8%
1995	BUIC	CENTURY	25	32	0	57	356	16%
1995	BUIC	LESABRE	35	38	0	73	398	18%
1995	BUIC	PARK AVENUE	16	16	0	32	145	22%
1995	BUIC	REGAL	28	27	0	55	203	27%
1995	BUIC	RIVIERA	18	12	0	30	108	28%
1995	BUIC	ROADMASTER	9	6	0	15	70	21%
1995	BUIC	SKYLARK	22	17	0	39	177	22%
1995	CADI	DEVILLE	38	33	0	71	334	21%
1995	CADI	ELDORADO	6	7	0	13	70	19%
1995	CADI	FLEETWOOD	3	0	0	3	31	10%
1995	CADI	SEVILLE	14	11	0	25	136	18%
1995	CHEV	ASTRO VAN	43	34	0	77	332	23%
1995	CHEV	BERETTA	41	29	0	70	296	24%
1995	CHEV	BLAZER	46	40	0	86	544	16%
1995	CHEV	C1500	33	34	0	67	357	19%
1995	CHEV	C2500	0	2	0	2	16	13%
1995	CHEV	CAMARO	35	11	0	46	358	13%
1995	CHEV	CAPRICE	12	10	0	22	159	14%
1995	CHEV	CAVALIER	48	39	0	87	516	17%
1995	CHEV	CORSICA	57	22	0	79	574	14%
1995	CHEV	CORVETTE	4	3	0	7	69	10%
1995	CHEV	G20	21	18	0	39	143	27%
1995	CHEV	G30	1	0	0	1	22	5%
1995	CHEV	K10	0	1	0	1	1	100%
1995	CHEV	K1500	45	59	0	104	597	17%

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Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Rapid Screen %
1995	CHEV	K2500	3	4	0	7	40	18%
1995	CHEV	LUMINA	123	106	0	229	1005	23%
1995	CHEV	MONTE CARLO	36	33	0	69	332	21%
1995	CHEV	S10	30	46	0	76	541	14%
1995	CHEV	SUBURBAN	14	21	0	35	174	20%
1995	CHRY	CIRRUS	21	18	0	39	251	16%
1995	CHRY	CONCORDE	24	13	0	37	188	20%
1995	CHRY	LEBARON	19	19	0	38	187	20%
1995	CHRY	LHS	13	17	0	30	123	24%
1995	CHRY	NEW YORKER	2	1	0	3	51	6%
1995	CHRY	SEBRING	6	3	0	9	72	13%
1995	CHRY	TOWN & COUNTRY	2	7	0	9	35	26%
1995	DODG	AVENGER	19	18	0	37	230	16%
1995	DODG	B150	5	1	0	6	6	100%
1995	DODG	CARAVAN	76	62	0	138	615	22%
1995	DODG	DAKOTA	11	23	0	34	299	11%
1995	DODG	INTREPID	54	59	0	113	639	18%
1995	DODG	NEON	61	46	0	107	741	14%
1995	DODG	RAM 1500	30	42	0	72	517	14%
1995	DODG	RAM 2500	3	1	0	4	35	11%
1995	DODG	RAM VAN	9	8	0	17	122	14%
1995	DODG	RAM WAGON	1	1	0	2	27	7%
1995	DODG	SPIRIT	7	7	0	14	112	13%
1995	DODG	STEALTH	3	0	0	3	21	14%
1995	DODG	STRATUS	23	18	0	41	203	20%
1995	EGIL	SUMMIT	4	0	0	4	19	21%
1995	EGIL	TALON	7	7	0	14	162	9%
1995	EGIL	VISION	4	5	0	9	57	16%
1995	FORD	AEROSTAR	18	25	0	43	284	15%
1995	FORD	ASPIRE	17	10	0	27	186	15%
1995	FORD	BRONCO	7	6	0	13	86	15%
1995	FORD	CLUB WAGON	2	2	0	4	23	17%
1995	FORD	CONTOUR	26	60	0	86	560	15%
1995	FORD	CROWN VICTORIA	27	26	0	53	377	14%
1995	FORD	E100	2	4	0	6	8	75%
1995	FORD	ECONOLINE	25	33	0	58	224	26%
1995	FORD	ESCORT	163	122	0	285	1310	22%
1995	FORD	EXPLORER	67	64	0	131	619	21%
1995	FORD	F150	99	103	0	202	1203	17%
1995	FORD	F250	7	3	0	10	36	28%
1995	FORD	FAIRMONT	1	0	0	1	1	100%
1995	FORD	MUSTANG	41	34	0	75	549	14%
1995	FORD	PROBE	22	15	0	37	244	15%
1995	FORD	RANGER	32	27	0	59	445	13%
1995	FORD	TAURUS	137	111	0	248	1297	19%
1995	FORD	THUNDERBIRD	29	31	0	60	300	20%
1995	FORD	WINDSTAR	112	94	0	206	904	23%
1995	GEO	METRO	9	13	0	22	189	12%
1995	GEO	PRIZM	24	34	0	58	263	22%
1995	GEO	TRACKER	2	6	0	8	121	7%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Rapid Screen %
1995	GMC	C1500	3	2	0	5	17	29%
1995	GMC	JIMMY	21	20	0	41	243	17%
1995	GMC	K1500	7	7	0	14	86	16%
1995	GMC	RG7500	0	1	0	1	2	50%
1995	GMC	SAFARI	72	63	0	135	501	27%
1995	GMC	SIERRA	33	35	0	68	395	17%
1995	GMC	SONOMA	15	13	0	28	184	15%
1995	GMC	VANDURA	93	79	0	172	654	26%
1995	GMC	YUKON	7	5	0	12	108	11%
1995	HOND	ACCORD	106	77	0	183	625	29%
1995	HOND	CIVIC	57	57	0	114	534	21%
1995	HOND	ODYSSEY	17	14	0	31	80	39%
1995	HOND	PASSPORT	12	4	0	16	70	23%
1995	HOND	PRELUDE	2	3	0	5	46	11%
1995	HYUN	ACCENT	5	6	0	11	82	13%
1995	HYUN	ELANTRA	7	7	0	14	104	13%
1995	HYUN	SCOUPE	1	1	0	2	13	15%
1995	HYUN	SONATA	13	4	0	17	90	19%
1995	INFI	G20	13	8	0	21	72	29%
1995	INFI	J30	3	8	0	11	57	19%
1995	ISU	CAB	2	1	0	3	22	14%
1995	ISU	RODEO	20	26	0	46	146	32%
1995	ISU	TROOPER	5	3	0	8	42	19%
1995	JAGU	VDP	1	0	0	1	10	10%
1995	JAGU	XJ6	3	3	0	6	51	12%
1995	JAGU	XJR	1	0	0	1	4	25%
1995	JAGU	XJS	2	2	0	4	17	24%
1995	JEEP	CHEROKEE	86	84	0	170	1100	15%
1995	JEEP	WRANGLER	6	20	0	26	394	7%
1995	LEXS	ES 300	19	11	0	30	92	33%
1995	LEXS	GS 300	5	1	0	6	18	33%
1995	LEXS	LS 400	8	4	0	12	46	26%
1995	LEXS	SC 300	2	0	0	2	12	17%
1995	LEXS	SC 400	2	1	0	3	11	27%
1995	LINC	CONTINENTAL	5	12	0	17	108	16%
1995	LINC	MARK VIII	5	3	0	8	57	14%
1995	LINC	TOWN CAR	33	32	0	65	280	23%
1995	LNDR	DISCOVERY	1	1	0	2	30	7%
1995	LNDR	RANGE ROVER	1	0	0	1	12	8%
1995	MAZD	626	47	32	0	79	334	24%
1995	MAZD	B2300	5	2	0	7	40	18%
1995	MAZD	MILLENNIA	24	21	0	45	154	29%
1995	MAZD	MPV WAGON	1	0	0	1	14	7%
1995	MAZD	MX3	4	4	0	8	34	24%
1995	MAZD	MX5 MIATA	2	1	0	3	46	7%
1995	MAZD	MX-6	7	12	0	19	65	29%
1995	MAZD	PROTEGE	18	11	0	29	182	16%
1995	MAZD	RX7	1	0	0	1	3	33%
1995	MERC	COUGAR	31	31	0	62	253	25%
1995	MERC	GRAND MARQUIS	32	40	0	72	336	21%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1995	MERC	MYSTIQUE	24	17	0	41		238	17%
1995	MERC	SABLE	31	25	0	56		268	21%
1995	MERC	TRACER	27	23	0	50		189	26%
1995	MERC	VILLAGER	46	20	0	66		279	24%
1995	MERZ	220	6	2	0	8		36	22%
1995	MERZ	280	4	4	0	8		43	19%
1995	MERZ	320	3	4	0	7		80	9%
1995	MERZ	400	1	0	0	1		1	100%
1995	MERZ	420	1	0	0	1		10	10%
1995	MERZ	500	0	3	0	3		36	8%
1995	MITS	3000	5	2	0	7		61	11%
1995	MITS	DIAMANTE	3	4	0	7		22	32%
1995	MITS	ECLIPSE	4	11	0	15		121	12%
1995	MITS	EXPO	1	1	0	2		10	20%
1995	MITS	GALANT	20	15	0	35		161	22%
1995	MITS	MIRAGE	10	6	0	16		77	21%
1995	MITS	MONTERO	2	6	0	8		47	17%
1995	NISS	200SX	5	4	0	9		52	17%
1995	NISS	240SX	4	5	0	9		42	21%
1995	NISS	300ZX	0	1	0	1		4	25%
1995	NISS	720	0	1	0	1		1	100%
1995	NISS	ALTIMA	52	38	0	90		421	21%
1995	NISS	KING CAB	5	9	0	14		51	27%
1995	NISS	MAXIMA	62	43	0	105		343	31%
1995	NISS	PATHFINDER	16	14	0	30		151	20%
1995	NISS	QUEST	13	6	0	19		62	31%
1995	NISS	SENTRA	10	7	0	17		113	15%
1995	NISS	STANDARD	2	3	0	5		54	9%
1995	OLDS	98	5	7	0	12		68	18%
1995	OLDS	ACHIEVA	17	13	0	30		136	22%
1995	OLDS	AURORA	9	11	0	20		172	12%
1995	OLDS	CIERA	37	55	0	92		486	19%
1995	OLDS	CUTLASS	48	31	0	79		402	20%
1995	OLDS	DELTA 88	23	24	0	47		241	20%
1995	OLDS	LSS	1	0	0	1		1	100%
1995	OLDS	SILHOUETTE	9	4	0	13		52	25%
1995	PLYM	ACCLAIM	4	8	0	12		69	17%
1995	PLYM	NEON	57	46	0	103		545	19%
1995	PLYM	VOYAGER	42	60	0	102		524	19%
1995	PONT	BONNEVILLE	43	34	0	77		325	24%
1995	PONT	FIREBIRD	9	12	0	21		185	11%
1995	PONT	GRAND AM	119	88	1	208		962	22%
1995	PONT	GRAND PRIX	63	50	0	113		553	20%
1995	PONT	SUNFIRE	16	9	0	25		192	13%
1995	PONT	TRANS SPORT	8	8	0	16		86	19%
1995	PORS	911	1	2	0	3		14	21%
1995	PORS	968	1	0	0	1		1	100%
1995	SAA	900	6	0	0	6		41	15%
1995	SAA	9000	2	1	0	3		9	33%
1995	STRN	SC	19	27	0	46		257	18%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1995	STRN	SL	69	67	0	136	740	18%	
1995	STRN	SW	6	2	0	8	49	16%	
1995	SUBA	IMPREZA	2	2	0	4	27	15%	
1995	SUBA	LEGACY	10	4	0	14	89	16%	
1995	SUZI	ESTEEM	1	0	0	1	15	7%	
1995	SUZI	SIDEKICK	2	4	0	6	58	10%	
1995	TOYT	1/2 TON	0	1	0	1	7	14%	
1995	TOYT	4RUNNER	15	15	0	30	129	23%	
1995	TOYT	AVALON	15	12	0	27	123	22%	
1995	TOYT	CAMRY	105	95	0	200	697	29%	
1995	TOYT	CELICA	14	13	0	27	87	31%	
1995	TOYT	COROLLA	53	36	0	89	397	22%	
1995	TOYT	DELUXE	2	1	0	3	10	30%	
1995	TOYT	LAND CRUISER	4	2	0	6	19	32%	
1995	TOYT	PASEO	1	1	0	2	12	17%	
1995	TOYT	PREVIA	8	5	0	13	34	38%	
1995	TOYT	SHORT BED	1	1	0	2	6	33%	
1995	TOYT	T100	3	0	0	3	32	9%	
1995	TOYT	TACOMA	2	4	0	6	37	16%	
1995	TOYT	TERCEL	15	16	0	31	130	24%	
1995	VOLK	CABRIO	2	2	0	4	26	15%	
1995	VOLK	GOLF	2	4	0	6	39	15%	
1995	VOLK	GTI	0	1	0	1	1	100%	
1995	VOLK	JETTA	6	11	0	17	107	16%	
1995	VOLK	PASSAT	3	1	0	4	25	16%	
1995	VOLV	70	1	1	0	2	2	100%	
1995	VOLV	850	36	17	0	53	167	32%	
1995	VOLV	940	3	4	0	7	29	24%	
1995	VOLV	960	5	1	0	6	29	21%	
1994	ACUR	INTEGRA	35	39	159	233	487	48%	
1994	ACUR	LEGEND	9	22	78	109	225	48%	
1994	ACUR	VIGOR	3	3	24	30	65	46%	
1994	AUDI	90	1	1	6	8	21	38%	
1994	AUDI	CABRIOLET	0	4	9	13	21	62%	
1994	BMW	318I	5	8	21	34	77	44%	
1994	BMW	318IC	1	0	0	1	10	10%	
1994	BMW	325I	14	19	53	86	232	37%	
1994	BMW	525I	5	5	18	28	54	52%	
1994	BMW	530I	2	4	8	14	40	35%	
1994	BMW	540I	4	5	4	13	29	45%	
1994	BMW	740I	3	2	12	17	40	43%	
1994	BUIC	CENTURY	39	78	251	368	989	37%	
1994	BUIC	LESABRE	55	79	294	428	910	47%	
1994	BUIC	PARK AVENUE	25	41	139	205	392	52%	
1994	BUIC	REGAL	23	43	119	185	411	45%	
1994	BUIC	ROADMASTER	15	15	53	83	259	32%	
1994	BUIC	SKYLARK	23	33	58	114	474	24%	
1994	CADI	DEVILLE	33	63	215	311	793	39%	
1994	CADI	ELDORADO	6	21	45	72	149	48%	
1994	CADI	FLEETWOOD	7	15	54	76	126	60%	

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1994	CADI	SEVILLE	16	27	90	133	315	42%	
1994	CHEV	ASTRO VAN	39	56	192	287	632	45%	
1994	CHEV	BERETTA	27	6	8	41	464	9%	
1994	CHEV	BLAZER	51	53	171	275	890	31%	
1994	CHEV	C10	0	0	1	1	1	100%	
1994	CHEV	C1500	45	94	358	497	1146	43%	
1994	CHEV	C2500	1	2	2	5	66	8%	
1994	CHEV	CAMARO	27	36	73	136	713	19%	
1994	CHEV	CAPRICE	24	5	16	45	414	11%	
1994	CHEV	CAVALIER	100	184	610	894	2317	39%	
1994	CHEV	CORSICA	63	16	40	119	1418	8%	
1994	CHEV	CORVETTE	8	12	26	46	174	26%	
1994	CHEV	G20	4	6	26	36	158	23%	
1994	CHEV	G30	3	0	0	3	20	15%	
1994	CHEV	K1500	51	77	270	398	972	41%	
1994	CHEV	K2500	7	6	16	29	111	26%	
1994	CHEV	LUMINA	47	51	98	196	962	20%	
1994	CHEV	S10	34	82	323	439	1084	40%	
1994	CHEV	SUBURBAN	14	36	110	160	389	41%	
1994	CHRY	CONCORDE	33	46	174	253	506	50%	
1994	CHRY	LEBARON	31	58	161	250	660	38%	
1994	CHRY	LHS	21	45	64	130	405	32%	
1994	CHRY	NEW YORKER	10	14	37	61	219	28%	
1994	CHRY	TOWN & COUNTRY	21	28	101	150	299	50%	
1994	DODG	B150	1	0	3	4	79	5%	
1994	DODG	B250	13	23	127	163	443	37%	
1994	DODG	B350	3	0	0	3	28	11%	
1994	DODG	CARAVAN	151	215	602	968	2240	43%	
1994	DODG	COLT	3	1	6	10	28	36%	
1994	DODG	DAKOTA	10	0	12	22	664	3%	
1994	DODG	INTREPID	76	95	233	404	1172	34%	
1994	DODG	RAM 1500	38	49	211	298	945	32%	
1994	DODG	RAM 2500	4	0	1	5	71	7%	
1994	DODG	RAM WAGON	1	0	1	2	2	100%	
1994	DODG	SHADOW	25	34	133	192	990	19%	
1994	DODG	SPIRIT	18	27	139	184	623	30%	
1994	DODG	STEALTH	3	6	16	25	63	40%	
1994	EGIL	EAGLE	0	0	1	1	2	50%	
1994	EGIL	SUMMIT	2	0	3	5	48	10%	
1994	EGIL	TALON	12	21	47	80	221	36%	
1994	EGIL	VISION	12	9	41	62	152	41%	
1994	FORD	AEROSTAR	19	57	236	312	736	42%	
1994	FORD	ASPIRE	7	8	51	66	233	28%	
1994	FORD	BRONCO	14	11	45	70	156	45%	
1994	FORD	CLUB WAGON	5	0	0	5	75	7%	
1994	FORD	CROWN VICTORIA	26	0	0	26	467	6%	
1994	FORD	ECONOLINE	40	48	276	364	739	49%	
1994	FORD	ESCORT	95	185	633	913	2115	43%	
1994	FORD	EXPLORER	88	189	722	999	2246	44%	
1994	FORD	F150	107	158	848	1113	2458	45%	

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Screen		
1994	FORD	F250	5	0	4	9		50	18%
1994	FORD	F350	1	0	0	1		2	50%
1994	FORD	MUSTANG	29	52	184	265		706	38%
1994	FORD	PROBE	36	40	133	209		804	26%
1994	FORD	RANGER	82	145	752	979		2418	40%
1994	FORD	TAURUS	108	224	864	1196		2321	52%
1994	FORD	TEMPO	35	76	503	614		1494	41%
1994	FORD	THUNDERBIRD	22	51	191	264		624	42%
1994	GEO	METRO	3	27	94	124		425	29%
1994	GEO	PRIZM	29	73	243	345		653	53%
1994	GEO	TRACKER	2	9	94	105		252	42%
1994	GMC	C1500	8	5	9	22		74	30%
1994	GMC	JIMMY	30	46	118	194		576	34%
1994	GMC	K1500	7	10	26	43		102	42%
1994	GMC	SAFARI	58	90	275	423		895	47%
1994	GMC	SIERRA	55	40	179	274		914	30%
1994	GMC	SONOMA	14	32	146	192		424	45%
1994	GMC	VANDURA	33	0	0	33		607	5%
1994	GMC	YUKON	8	2	23	33		69	48%
1994	HOND	ACCORD	203	242	611	1056		2143	49%
1994	HOND	CIVIC	35	87	313	435		990	44%
1994	HOND	PASSPORT	5	5	21	31		61	51%
1994	HOND	PRELUDE	6	11	37	54		106	51%
1994	HYUN	ELANTRA	10	2	1	13		160	8%
1994	HYUN	EXCEL	7	12	17	36		200	18%
1994	HYUN	SCOUPÉ	1	5	7	13		35	37%
1994	HYUN	SONATA	1	2	7	10		40	25%
1994	INFI	G20	10	13	35	58		114	51%
1994	INFI	J30	22	27	51	100		195	51%
1994	INFI	Q45	11	17	15	43		122	35%
1994	ISU	AMIGO	1	1	13	15		21	71%
1994	ISU	CAB	0	4	14	18		66	27%
1994	ISU	RODEO	18	14	56	88		198	44%
1994	ISU	TROOPER	8	16	38	62		126	49%
1994	JAGU	VDP	1	3	8	12		22	55%
1994	JAGU	XJ6	4	7	7	18		72	25%
1994	JAGU	XJS	3	2	4	9		38	24%
1994	JEEP	CHEROKEE	107	149	470	726		2430	30%
1994	JEEP	WAGONEER	0	1	2	3		4	75%
1994	JEEP	WRANGLER	5	3	52	60		410	15%
1994	KIA	SEPHIA	1	0	4	5		8	63%
1994	LEXS	ES 300	27	30	75	132		262	50%
1994	LEXS	GS 300	6	9	14	29		51	57%
1994	LEXS	LS 400	12	10	22	44		93	47%
1994	LEXS	SC 300	3	0	0	3		13	23%
1994	LEXS	SC 400	1	3	3	7		13	54%
1994	LINC	CONTINENTAL	16	19	74	109		291	37%
1994	LINC	MARK VIII	9	15	29	53		176	30%
1994	LINC	TOWN CAR	29	85	232	346		752	46%
1994	LNDR	DEFENDER	1	0	0	1		6	17%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Total Rapid Screen %
1994	LNDR	DISCOVERY	1	1	4	6	18	33%
1994	MAZD	323	1	3	14	18	50	36%
1994	MAZD	626	37	77	130	244	626	39%
1994	MAZD	929	5	5	19	29	44	66%
1994	MAZD	B2300	6	20	68	94	208	45%
1994	MAZD	B3000	3	7	70	80	172	47%
1994	MAZD	B4000	8	10	56	74	138	54%
1994	MAZD	MPV WAGON	8	9	28	45	83	54%
1994	MAZD	MX3	8	9	51	68	161	42%
1994	MAZD	MX5 MIATA	10	6	38	54	132	41%
1994	MAZD	MX-6	15	7	37	59	141	42%
1994	MAZD	NAVAJO	3	5	13	21	51	41%
1994	MAZD	PROTEGE	19	65	252	336	684	49%
1994	MERC	COUGAR	30	45	202	277	603	46%
1994	MERC	GRAND MARQUIS	28	63	160	251	673	37%
1994	MERC	SABLE	28	65	233	326	590	55%
1994	MERC	TOPAZ	15	26	146	187	427	44%
1994	MERC	TRACER	18	28	103	149	293	51%
1994	MERC	VILLAGER	44	62	208	314	547	57%
1994	MERZ	220	0	3	7	10	25	40%
1994	MERZ	280	3	9	11	23	50	46%
1994	MERZ	320	11	0	0	11	124	9%
1994	MERZ	400	1	0	2	3	3	100%
1994	MERZ	420	2	0	1	3	21	14%
1994	MERZ	500	3	0	0	3	28	11%
1994	MERZ	600	1	0	0	1	6	17%
1994	MITS	3000	7	14	31	52	126	41%
1994	MITS	DIAMANTE	4	8	5	17	66	26%
1994	MITS	ECLIPSE	11	12	43	66	186	35%
1994	MITS	EXPO	2	6	15	23	35	66%
1994	MITS	GALANT	17	24	78	119	277	43%
1994	MITS	MIGHTY MAX	0	0	4	4	10	40%
1994	MITS	MIRAGE	0	8	17	25	68	37%
1994	MITS	MONTERO	4	1	8	13	51	25%
1994	NISS	300ZX	0	4	15	19	41	46%
1994	NISS	ALTIMA	48	104	339	491	1059	46%
1994	NISS	KING CAB	3	8	30	41	92	45%
1994	NISS	MAXIMA	26	35	120	181	400	45%
1994	NISS	PATHFINDER	7	19	44	70	192	36%
1994	NISS	QUEST	12	26	47	85	166	51%
1994	NISS	SENTRA	50	86	230	366	803	46%
1994	NISS	STANDARD	0	8	39	47	125	38%
1994	OLDS	98	14	10	41	65	152	43%
1994	OLDS	ACHIEVA	21	37	62	120	380	32%
1994	OLDS	BRAVADA	9	5	13	27	88	31%
1994	OLDS	CALAIS	3	6	20	29	30	97%
1994	OLDS	CIERA	0	3	5	8	9	89%
1994	OLDS	CUTLASS	86	147	412	645	1793	36%
1994	OLDS	DELTA 88	44	60	146	250	582	43%
1994	OLDS	SILHOUETTE	5	9	35	49	92	53%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
1994	PLYM	ACCLAIM	9	39	127	175		445	39%
1994	PLYM	COLT	3	0	1	4		17	24%
1994	PLYM	LASER	1	6	10	17		51	33%
1994	PLYM	SUNDANCE	18	34	183	235		612	38%
1994	PLYM	VOYAGER	87	119	415	621		1442	43%
1994	PONT	BONNEVILLE	61	72	197	330		686	48%
1994	PONT	FIREBIRD	20	18	22	60		364	16%
1994	PONT	GRAND AM	100	77	152	329		1503	22%
1994	PONT	GRAND PRIX	47	84	138	269		920	29%
1994	PONT	SUNBIRD	29	0	0	29		614	5%
1994	PONT	TRANS SPORT	12	25	56	93		180	52%
1994	PORS	968	1	0	0	1		6	17%
1994	SAA	900	6	3	10	19		70	27%
1994	SAA	9000	1	0	0	1		11	9%
1994	STRN	LS	0	2	7	9		11	82%
1994	STRN	LS1	0	0	6	6		8	75%
1994	STRN	LS2	0	3	12	15		16	94%
1994	STRN	SC	29	52	186	267		655	41%
1994	STRN	SL	61	130	481	672		1687	40%
1994	STRN	SW	7	16	65	88		177	50%
1994	SUBA	IMPREZA	3	0	4	7		13	54%
1994	SUBA	LEGACY	9	13	38	60		115	52%
1994	SUBA	LOYALE	0	0	2	2		2	100%
1994	SUBA	SVX	5	6	6	17		31	55%
1994	SUZI	SIDEKICK	1	14	48	63		138	46%
1994	SUZI	SWIFT	0	2	6	8		20	40%
1994	TOYT	1/2 TON	2	2	9	13		41	32%
1994	TOYT	4RUNNER	16	20	58	94		182	52%
1994	TOYT	CAMRY	165	227	651	1043		1890	55%
1994	TOYT	CELICA	20	36	99	155		330	47%
1994	TOYT	COROLLA	59	100	410	569		1068	53%
1994	TOYT	DELUXE	12	9	45	66		135	49%
1994	TOYT	LAND CRUISER	7	0	0	7		53	13%
1994	TOYT	LONG BED	3	7	41	51		90	57%
1994	TOYT	PASEO	4	0	0	4		61	7%
1994	TOYT	PREVIA	9	6	22	37		58	64%
1994	TOYT	SHORT BED	2	14	55	71		128	55%
1994	TOYT	SR5	0	2	4	6		15	40%
1994	TOYT	SUPRA	1	0	0	1		28	4%
1994	TOYT	T100	2	4	11	17		35	49%
1994	TOYT	TERCEL	19	29	83	131		360	36%
1994	VOLK	GOLF	1	5	5	11		32	34%
1994	VOLK	JETTA	10	16	44	70		162	43%
1994	VOLK	PASSAT	0	1	8	9		21	43%
1994	VOLV	850	36	36	70	142		309	46%
1994	VOLV	940	18	1	4	23		128	18%
1994	VOLV	960	7	0	0	7		45	16%
1993	ACUR	INTEGRA	6	7	0	13		82	16%
1993	ACUR	LEGEND	6	10	0	16		87	18%
1993	ACUR	VIGOR	0	2	0	2		20	10%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Rapid Screen %
1993	AUDI	100	2	0	0	2	17	12%
1993	AUDI	90	1	0	0	1	35	3%
1993	BMW	318I	2	1	0	3	22	14%
1993	BMW	325I	4	3	0	7	47	15%
1993	BMW	525I	7	2	0	9	29	31%
1993	BMW	740I	1	2	0	3	14	21%
1993	BUIC	CENTURY	23	35	0	58	314	18%
1993	BUIC	LESABRE	26	21	0	47	302	16%
1993	BUIC	PARK AVENUE	10	18	0	28	130	22%
1993	BUIC	REGAL	29	14	0	43	202	21%
1993	BUIC	RIVIERA	2	3	0	5	20	25%
1993	BUIC	ROADMASTER	11	6	0	17	84	20%
1993	BUIC	SKYLARK	12	15	0	27	179	15%
1993	CADI	DEVILLE	13	0	0	13	292	4%
1993	CADI	ELDORADO	5	6	0	11	50	22%
1993	CADI	FLEETWOOD	3	0	0	3	60	5%
1993	CADI	SEVILLE	12	12	0	24	97	25%
1993	CHEV	ASTRO VAN	12	23	0	35	262	13%
1993	CHEV	BERETTA	8	0	0	8	127	6%
1993	CHEV	BLAZER	35	22	0	57	338	17%
1993	CHEV	C10	1	1	0	2	2	100%
1993	CHEV	C1500	16	23	0	39	335	12%
1993	CHEV	C2500	1	1	0	2	16	13%
1993	CHEV	CAMARO	5	2	0	7	109	6%
1993	CHEV	CAPRICE	9	2	0	11	166	7%
1993	CHEV	CAVALIER	34	67	0	101	849	12%
1993	CHEV	CORSICA	24	26	0	50	463	11%
1993	CHEV	CORVETTE	4	6	0	10	62	16%
1993	CHEV	G20	3	6	0	9	76	12%
1993	CHEV	K10	2	1	0	3	3	100%
1993	CHEV	K1500	8	14	0	22	288	8%
1993	CHEV	LUMINA	50	60	0	110	776	14%
1993	CHEV	S10	14	23	0	37	333	11%
1993	CHEV	SUBURBAN	7	6	0	13	112	12%
1993	CHRY	CONCORDE	7	8	0	15	142	11%
1993	CHRY	IMPERIAL	1	2	0	3	12	25%
1993	CHRY	LEBARON	14	20	0	34	214	16%
1993	CHRY	NEW YORKER	9	13	0	22	139	16%
1993	CHRY	TOWN & COUNTRY	5	8	0	13	97	13%
1993	DODG	B250	1	2	0	3	47	6%
1993	DODG	CARAVAN	51	73	0	124	883	14%
1993	DODG	COLT	1	0	0	1	29	3%
1993	DODG	D-150	1	1	0	2	41	5%
1993	DODG	DAKOTA	11	2	0	13	331	4%
1993	DODG	DAYTONA	1	4	0	5	41	12%
1993	DODG	DYNASTY	11	20	0	31	198	16%
1993	DODG	INTREPID	7	5	0	12	231	5%
1993	DODG	RAM 50	9	4	0	13	13	100%
1993	DODG	RAM WAGON	1	0	0	1	1	100%
1993	DODG	RAMCHARGER	1	0	0	1	6	17%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1993	DODG	SHADOW	23	6	0	29		454	6%
1993	DODG	SPIRIT	10	4	0	14		239	6%
1993	DODG	STEALTH	2	2	0	4		36	11%
1993	EGIL	TALON	5	4	0	9		105	9%
1993	EGIL	VISION	2	3	0	5		71	7%
1993	FORD	AEROSTAR	27	42	0	69		487	14%
1993	FORD	BRONCO	6	7	0	13		82	16%
1993	FORD	CLUB WAGON	2	2	0	4		22	18%
1993	FORD	CROWN VICTORIA	13	8	0	21		223	9%
1993	FORD	ECONOLINE	24	17	0	41		261	16%
1993	FORD	ESCORT	68	95	0	163		1117	15%
1993	FORD	EXPLORER	37	54	0	91		784	12%
1993	FORD	F150	66	84	0	150		958	16%
1993	FORD	F250	3	1	0	4		23	17%
1993	FORD	FESTIVA	1	6	0	7		118	6%
1993	FORD	MUSTANG	12	6	0	18		212	8%
1993	FORD	PROBE	18	13	0	31		370	8%
1993	FORD	RANGER	33	56	0	89		788	11%
1993	FORD	TAURUS	63	88	0	151		1131	13%
1993	FORD	TEMPO	44	66	0	110		878	13%
1993	FORD	THUNDERBIRD	15	22	0	37		297	12%
1993	GEO	METRO	3	2	0	5		118	4%
1993	GEO	PRIZM	12	22	0	34		165	21%
1993	GEO	STORM	7	4	0	11		83	13%
1993	GEO	TRACKER	3	3	0	6		82	7%
1993	GMC	2500	1	0	0	1		1	100%
1993	GMC	C1500	2	3	0	5		26	19%
1993	GMC	JIMMY	14	11	0	25		182	14%
1993	GMC	K1500	0	7	0	7		47	15%
1993	GMC	SAFARI	15	10	0	25		192	13%
1993	GMC	SIERRA	8	22	0	30		310	10%
1993	GMC	SONOMA	19	13	0	32		196	16%
1993	GMC	VANDURA	18	18	0	36		219	16%
1993	HOND	ACCORD	71	62	0	133		519	26%
1993	HOND	CIVIC	25	33	0	58		341	17%
1993	HOND	PRELUDE	1	1	0	2		43	5%
1993	HYUN	ELANTRA	5	0	0	5		56	9%
1993	HYUN	EXCEL	2	0	0	2		51	4%
1993	HYUN	SCOUPE	1	0	0	1		14	7%
1993	HYUN	SONATA	1	0	0	1		37	3%
1993	INFI	G20	9	18	0	27		97	28%
1993	INFI	J30	14	9	0	23		99	23%
1993	INFI	Q45	3	0	0	3		15	20%
1993	ISU	RODEO	4	3	0	7		51	14%
1993	ISU	TROOPER	1	3	0	4		24	17%
1993	JAGU	XJ6	4	0	0	4		34	12%
1993	JAGU	XJS	2	0	0	2		6	33%
1993	JEEP	CHEROKEE	52	53	0	105		880	12%
1993	JEEP	WAGONEER	1	0	0	1		19	5%
1993	JEEP	WRANGLER	2	8	0	10		154	6%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1993	LEXS	ES 300	10	6	0	16		76	21%
1993	LEXS	GS 300	2	0	0	2		25	8%
1993	LEXS	LS 400	6	6	0	12		43	28%
1993	LEXS	SC 300	1	1	0	2		16	13%
1993	LEXS	SC 400	3	2	0	5		21	24%
1993	LINC	CONTINENTAL	3	5	0	8		76	11%
1993	LINC	MARK VIII	6	5	0	11		71	15%
1993	LINC	TOWN CAR	13	27	0	40		271	15%
1993	LNDR	RANGE ROVER	1	0	0	1		9	11%
1993	MAZD	323	0	1	0	1		9	11%
1993	MAZD	626	14	15	0	29		213	14%
1993	MAZD	929	2	0	0	2		18	11%
1993	MAZD	B2200	1	1	0	2		39	5%
1993	MAZD	B2600	1	1	0	2		20	10%
1993	MAZD	MPV WAGON	0	7	0	7		33	21%
1993	MAZD	MX3	5	5	0	10		97	10%
1993	MAZD	MX5 MIATA	1	6	0	7		34	21%
1993	MAZD	MX-6	7	5	0	12		122	10%
1993	MAZD	PROTEGE	14	16	0	30		216	14%
1993	MAZD	RX7	1	0	0	1		24	4%
1993	MERC	COUGAR	12	20	0	32		241	13%
1993	MERC	GRAND MARQUIS	11	23	0	34		240	14%
1993	MERC	SABLE	23	34	0	57		305	19%
1993	MERC	TOPAZ	12	20	0	32		236	14%
1993	MERC	TRACER	21	13	0	34		211	16%
1993	MERC	VILLAGER	38	40	0	78		327	24%
1993	MERZ	190	5	1	0	6		45	13%
1993	MERZ	300	1	3	0	4		30	13%
1993	MERZ	320	1	2	0	3		3	100%
1993	MERZ	400	1	0	0	1		10	10%
1993	MERZ	420	1	0	0	1		1	100%
1993	MITS	3000	4	1	0	5		43	12%
1993	MITS	DIAMANTE	11	3	0	14		61	23%
1993	MITS	ECLIPSE	4	3	0	7		104	7%
1993	MITS	EXPO	2	0	0	2		15	13%
1993	MITS	GALANT	2	0	0	2		13	15%
1993	MITS	MIRAGE	0	2	0	2		21	10%
1993	NISS	240SX	3	1	0	4		41	10%
1993	NISS	300ZX	0	1	0	1		22	5%
1993	NISS	720	0	1	0	1		1	100%
1993	NISS	ALTIMA	29	35	0	64		375	17%
1993	NISS	KING CAB	2	3	0	5		25	20%
1993	NISS	MAXIMA	16	18	0	34		192	18%
1993	NISS	NX	2	2	0	4		21	19%
1993	NISS	PATHFINDER	1	3	0	4		42	10%
1993	NISS	QUEST	5	5	0	10		58	17%
1993	NISS	SENTRA	20	26	0	46		214	21%
1993	NISS	SHORT BED	2	4	0	6		44	14%
1993	OLDS	98	9	3	0	12		41	29%
1993	OLDS	ACHIEVA	6	6	0	12		87	14%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1993	OLDS	CUTLASS	33	63	0	96		676	14%
1993	OLDS	DELTA 88	23	8	0	31		170	18%
1993	OLDS	SILHOUETTE	2	4	0	6		16	38%
1993	PLYM	ACCLAIM	8	9	0	17		167	10%
1993	PLYM	COLT	3	0	0	3		32	9%
1993	PLYM	LASER	5	6	0	11		75	15%
1993	PLYM	SUNDANCE	8	2	0	10		251	4%
1993	PLYM	VOYAGER	39	48	0	87		524	17%
1993	PONT	BONNEVILLE	45	45	0	90		419	21%
1993	PONT	FIREBIRD	4	0	0	4		68	6%
1993	PONT	GRAND AM	65	52	0	117		723	16%
1993	PONT	GRAND PRIX	20	28	0	48		277	17%
1993	PONT	LEMANS	0	1	0	1		20	5%
1993	PONT	SUNBIRD	8	16	0	24		253	9%
1993	PONT	TRANS SPORT	8	4	0	12		46	26%
1993	SAA	900	0	3	0	3		14	21%
1993	SAA	9000	2	1	0	3		14	21%
1993	STRN	SC	10	18	0	28		230	12%
1993	STRN	SL	26	51	0	77		598	13%
1993	STRN	SW	2	10	0	12		57	21%
1993	SUBA	IMPREZA	3	4	0	7		44	16%
1993	SUBA	LEGACY	11	5	0	16		78	21%
1993	SUBA	LOYALE	1	1	0	2		13	15%
1993	SUZI	SIDEKICK	1	5	0	6		35	17%
1993	TOYT	4RUNNER	3	7	0	10		40	25%
1993	TOYT	CAMRY	83	72	0	155		635	24%
1993	TOYT	CELICA	8	7	0	15		82	18%
1993	TOYT	COROLLA	25	38	0	63		365	17%
1993	TOYT	DELUXE	6	4	0	10		31	32%
1993	TOYT	LAND CRUISER	2	0	0	2		12	17%
1993	TOYT	MR2	0	1	0	1		11	9%
1993	TOYT	PASEO	2	3	0	5		38	13%
1993	TOYT	PREVIA	2	6	0	8		40	20%
1993	TOYT	SHORT BED	6	4	0	10		47	21%
1993	TOYT	SR5	0	2	0	2		4	50%
1993	TOYT	T100	2	3	0	5		18	28%
1993	TOYT	TERCEL	11	8	0	19		133	14%
1993	TOYT	XTRACAB	1	3	0	4		35	11%
1993	VOLK	CABRIOLET	0	1	0	1		9	11%
1993	VOLK	EUROVAN	2	0	0	2		16	13%
1993	VOLK	FOX	1	1	0	2		27	7%
1993	VOLK	PASSAT	2	4	0	6		20	30%
1993	VOLV	240	2	3	0	5		29	17%
1993	VOLV	850	13	4	0	17		80	21%
1993	VOLV	940	6	4	0	10		47	21%
1993	VOLV	960	3	2	0	5		26	19%
1992	ACUR	INTEGRA	10	11	52	73		223	33%
1992	ACUR	LEGEND	9	22	70	101		234	43%
1992	ACUR	VIGOR	2	8	15	25		105	24%
1992	AUDI	100	3	4	9	16		58	28%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
1992	BMW	318I		1	5	7	13	38	34%
1992	BMW	325I		12	13	25	50	181	28%
1992	BMW	525I		7	13	26	46	110	42%
1992	BMW	535I		0	3	2	5	10	50%
1992	BMW	735I		1	0	7	8	14	57%
1992	BUIC	CENTURY		28	40	108	176	821	21%
1992	BUIC	LESABRE		24	0	0	24	857	3%
1992	BUIC	PARK AVENUE		18	1	15	34	340	10%
1992	BUIC	REGAL		27	30	56	113	477	24%
1992	BUIC	RIVIERA		4	6	22	32	86	37%
1992	BUIC	ROADMASTER		11	27	58	96	396	24%
1992	BUIC	SKYLARK		15	2	20	37	337	11%
1992	CADI	ALLANTE		1	0	0	1	10	10%
1992	CADI	BROUGHAM		0	1	10	11	65	17%
1992	CADI	DEVILLE		20	0	0	20	648	3%
1992	CADI	ELDORADO		3	15	22	40	144	28%
1992	CADI	FLEETWOOD		1	0	0	1	49	2%
1992	CADI	SEVILLE		10	19	36	65	233	28%
1992	CHEV	ASTRO VAN		6	6	40	52	560	9%
1992	CHEV	BERETTA		16	13	22	51	299	17%
1992	CHEV	BLAZER		20	35	132	187	656	29%
1992	CHEV	C10		0	2	2	4	4	100%
1992	CHEV	C1500		21	12	71	104	805	13%
1992	CHEV	C2500		1	0	0	1	46	2%
1992	CHEV	CAMARO		12	0	0	12	482	2%
1992	CHEV	CAPRICE		13	0	0	13	304	4%
1992	CHEV	CAVALIER		46	121	388	555	1958	28%
1992	CHEV	CORSICA		32	0	0	32	820	4%
1992	CHEV	CORVETTE		7	0	0	7	112	6%
1992	CHEV	G20		2	0	0	2	189	1%
1992	CHEV	G30		1	0	0	1	22	5%
1992	CHEV	K1500		12	8	44	64	485	13%
1992	CHEV	K2500		0	0	2	2	35	6%
1992	CHEV	LUMINA		72	56	117	245	1793	14%
1992	CHEV	PRIZM		7	7	21	35	38	92%
1992	CHEV	S10		12	39	227	278	907	31%
1992	CHEV	SUBURBAN		2	8	10	20	155	13%
1992	CHRY	IMPERIAL		0	1	8	9	29	31%
1992	CHRY	LEBARON		19	24	73	116	652	18%
1992	CHRY	NEW YORKER		12	25	60	97	387	25%
1992	CHRY	TOWN & COUNTRY		1	6	13	20	89	22%
1992	DODG	A100		1	0	0	1	1	100%
1992	DODG	B250		8	21	74	103	275	37%
1992	DODG	B350		1	0	0	1	10	10%
1992	DODG	CARAVAN		55	40	101	196	1623	12%
1992	DODG	COLT		1	4	9	14	36	39%
1992	DODG	D-150		2	0	0	2	93	2%
1992	DODG	DAKOTA		12	1	5	18	965	2%
1992	DODG	DAYTONA		1	0	0	1	103	1%
1992	DODG	DYNASTY		6	0	0	6	568	1%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1992	DODG	RAM 1500	0	2	2	4		6	67%
1992	DODG	RAM 50	0	1	1	2		11	18%
1992	DODG	SHADOW	12	11	55	78		748	10%
1992	DODG	SPIRIT	12	0	0	12		543	2%
1992	DODG	STEALTH	6	3	12	21		122	17%
1992	EGIL	Premier	2	0	0	2		18	11%
1992	EGIL	SUMMIT	4	1	8	13		77	17%
1992	EGIL	TALON	5	0	0	5		190	3%
1992	FORD	AEROSTAR	14	45	112	171		603	28%
1992	FORD	BRONCO	9	4	8	21		113	19%
1992	FORD	CLUB WAGON	4	4	18	26		94	28%
1992	FORD	CROWN VICTORIA	21	3	19	43		641	7%
1992	FORD	ECONOLINE	22	24	62	108		509	21%
1992	FORD	ESCORT	27	65	196	288		1119	26%
1992	FORD	EXPLORER	43	104	410	557		1517	37%
1992	FORD	F150	56	131	442	629		1769	36%
1992	FORD	F250	2	1	8	11		60	18%
1992	FORD	FESTIVA	3	3	27	33		89	37%
1992	FORD	MUSTANG	7	7	53	67		409	16%
1992	FORD	PROBE	16	17	85	118		325	36%
1992	FORD	RANGER	19	62	307	388		1251	31%
1992	FORD	TAURUS	73	107	401	581		1812	32%
1992	FORD	TEMPO	41	66	347	454		1494	30%
1992	FORD	THUNDERBIRD	5	19	61	85		289	29%
1992	GEO	METRO	0	2	13	15		435	3%
1992	GEO	PRIZM	19	42	157	218		626	35%
1992	GEO	STORM	11	9	54	74		222	33%
1992	GEO	TRACKER	1	8	92	101		212	48%
1992	GMC		1	0	0	1		6	17%
1992	GMC	1000	2	2	18	22		23	96%
1992	GMC	C1500	5	3	20	28		64	44%
1992	GMC	G2500	1	0	0	1		7	14%
1992	GMC	JIMMY	14	20	71	105		286	37%
1992	GMC	K1500	1	0	0	1		51	2%
1992	GMC	SAFARI	18	41	278	337		915	37%
1992	GMC	SIERRA	12	0	2	14		676	2%
1992	GMC	SONOMA	14	27	100	141		430	33%
1992	GMC	VANDURA	24	35	111	170		975	17%
1992	GMC	YUKON	1	0	0	1		31	3%
1992	HOND	ACCORD	149	198	484	831		1950	43%
1992	HOND	CIVIC	29	52	216	297		751	40%
1992	HOND	PRELUDE	12	19	28	59		188	31%
1992	HYUN	ELANTRA	1	0	0	1		62	2%
1992	HYUN	EXCEL	0	2	12	14		107	13%
1992	HYUN	SONATA	2	0	0	2		49	4%
1992	INFI	G20	6	9	38	53		168	32%
1992	INFI	M30	0	1	10	11		25	44%
1992	INFI	Q45	7	11	25	43		100	43%
1992	ISU	CAB	1	0	0	1		135	1%
1992	ISU	RODEO	8	2	5	15		164	9%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1992	ISU	TROOPER	1	3	13	17	47	36%	
1992	JAGU	XJ6	2	0	0	2	45	4%	
1992	JEEP	CHEROKEE	27	60	219	306	694	44%	
1992	JEEP	WRANGLER	2	10	47	59	196	30%	
1992	LEXS	ES 300	24	21	50	95	202	47%	
1992	LEXS	LS 400	13	14	18	45	90	50%	
1992	LEXS	SC 300	0	7	21	28	52	54%	
1992	LEXS	SC 400	8	9	18	35	71	49%	
1992	LINC	CONTINENTAL	10	23	46	79	266	30%	
1992	LINC	MARK VII	3	4	13	20	37	54%	
1992	LINC	TOWN CAR	24	50	132	206	661	31%	
1992	MAZD	323	2	3	19	24	70	34%	
1992	MAZD	626	7	14	54	75	152	49%	
1992	MAZD	929	6	10	16	32	124	26%	
1992	MAZD	B2200	3	0	0	3	129	2%	
1992	MAZD	B2600	1	0	0	1	70	1%	
1992	MAZD	MPV WAGON	9	14	56	79	170	46%	
1992	MAZD	MX3	7	14	45	66	162	41%	
1992	MAZD	MX5 MIATA	2	6	43	51	115	44%	
1992	MAZD	MX6	2	4	13	19	43	44%	
1992	MAZD	NAVAJO	1	2	9	12	33	36%	
1992	MAZD	PROTEGE	11	22	99	132	367	36%	
1992	MERC	CAPRI	0	2	7	9	49	18%	
1992	MERC	COUGAR	11	28	124	163	389	42%	
1992	MERC	GRAND MARQUIS	29	87	242	358	957	37%	
1992	MERC	SABLE	29	72	208	309	803	38%	
1992	MERC	TOPAZ	21	35	155	211	571	37%	
1992	MERC	TRACER	1	9	29	39	129	30%	
1992	MERZ	190	3	8	18	29	82	35%	
1992	MERZ	300	7	3	8	18	91	20%	
1992	MERZ	400	3	0	0	3	43	7%	
1992	MERZ	500	2	0	0	2	58	3%	
1992	MITS	3000	3	2	6	11	49	22%	
1992	MITS	DIAMANTE	7	0	0	7	102	7%	
1992	MITS	ECLIPSE	12	11	19	42	255	16%	
1992	MITS	EXPO	4	0	0	4	82	5%	
1992	MITS	GALANT	10	0	0	10	99	10%	
1992	MITS	MIGHTY MAX	1	2	2	5	10	50%	
1992	MITS	MIRAGE	4	0	0	4	61	7%	
1992	MITS	PRECIS	1	0	3	4	6	67%	
1992	NISS	240SX	3	0	3	6	102	6%	
1992	NISS	300ZX	1	1	6	8	20	40%	
1992	NISS	CLA83	0	1	8	9	10	90%	
1992	NISS	KING CAB	1	2	11	14	44	32%	
1992	NISS	MAXIMA	23	29	81	133	341	39%	
1992	NISS	NX	2	1	4	7	31	23%	
1992	NISS	PATHFINDER	2	2	19	23	81	28%	
1992	NISS	SENTRA	18	56	123	197	514	38%	
1992	NISS	SHORT BED	1	2	25	28	69	41%	
1992	NISS	STANDARD	0	0	1	1	1	100%	

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1992	NISS	STANZA	9	19	64	92	267	34%	
1992	OLDS	98	11	0	0	11	243	5%	
1992	OLDS	ACHIEVA	16	17	36	69	357	19%	
1992	OLDS	BRAVADA	1	2	8	11	58	19%	
1992	OLDS	CIERRA	2	0	0	2	5	40%	
1992	OLDS	CUTLASS	48	4	13	65	1472	4%	
1992	OLDS	DELTA 88	29	0	0	29	726	4%	
1992	OLDS	SILHOUETTE	2	0	3	5	55	9%	
1992	OLDS	TORONADO	1	0	0	1	28	4%	
1992	PLYM	ACCLAIM	8	3	36	47	419	11%	
1992	PLYM	COLT	2	4	5	11	47	23%	
1992	PLYM	LASER	6	9	17	32	163	20%	
1992	PLYM	SUNDANCE	9	2	12	23	457	5%	
1992	PLYM	VOYAGER	26	45	110	181	1266	14%	
1992	PONT	BONNEVILLE	40	6	13	59	824	7%	
1992	PONT	FIREBIRD	10	0	0	10	208	5%	
1992	PONT	GRAND AM	47	5	16	68	1354	5%	
1992	PONT	GRAND PRIX	20	19	54	93	581	16%	
1992	PONT	SUNBIRD	17	20	42	79	497	16%	
1992	PONT	TRANS SPORT	9	0	7	16	155	10%	
1992	PORS	968	2	0	0	2	9	22%	
1992	SAA	900	5	5	20	30	52	58%	
1992	SAA	9000	3	4	7	14	31	45%	
1992	STRN	SC	4	0	0	4	246	2%	
1992	STRN	SL	21	21	60	102	1097	9%	
1992	SUBA	LEGACY	11	14	55	80	192	42%	
1992	SUBA	LOYALE	2	13	31	46	101	46%	
1992	SUBA	SVX	2	2	11	15	50	30%	
1992	SUZI	SIDEKICK	0	0	15	15	92	16%	
1992	SUZI	SWIFT	0	1	6	7	14	50%	
1992	TOYT	4RUNNER	4	5	34	43	84	51%	
1992	TOYT	CAB/CHASS	0	0	2	2	2	100%	
1992	TOYT	CAMRY	147	198	496	841	1741	48%	
1992	TOYT	CELICA	20	27	107	154	348	44%	
1992	TOYT	COROLLA	47	88	391	526	1154	46%	
1992	TOYT	DELUXE	5	13	73	91	179	51%	
1992	TOYT	LAND CRUISER	4	0	0	4	37	11%	
1992	TOYT	MR2	0	0	3	3	24	13%	
1992	TOYT	PASEO	11	20	49	80	271	30%	
1992	TOYT	PREVIA	14	22	43	79	228	35%	
1992	TOYT	SHORT BED	3	5	29	37	77	48%	
1992	TOYT	SR5	0	0	4	4	7	57%	
1992	TOYT	TERCEL	11	2	6	19	323	6%	
1992	VOLK	CABRIOLET	2	0	0	2	38	5%	
1992	VOLK	GOLF	0	2	9	11	31	35%	
1992	VOLK	JETTA	6	12	16	34	77	44%	
1992	VOLV	240	4	4	11	19	100	19%	
1992	VOLV	740	9	1	12	22	75	29%	
1992	VOLV	940	10	7	22	39	87	45%	
1992	VOLV	960	5	6	7	18	42	43%	

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1991	ACUR	INTEGRA	9	6	0	15		137	11%
1991	ACUR	LEGEND	4	8	0	12		111	11%
1991	ALFA	164	1	1	0	2		7	29%
1991	AUDI	100	1	0	0	1		32	3%
1991	AUDI	200	1	0	0	1		5	20%
1991	AUDI	80	1	0	0	1		7	14%
1991	BMW	318I	2	1	0	3		27	11%
1991	BMW	325I	0	1	0	1		24	4%
1991	BMW	525I	1	3	0	4		15	27%
1991	BMW	535I	1	0	0	1		5	20%
1991	BMW	735I	2	0	0	2		9	22%
1991	BMW	M5	0	1	0	1		4	25%
1991	BUIC	CENTURY	18	6	0	24		275	9%
1991	BUIC	LESABRE	17	13	0	30		189	16%
1991	BUIC	PARK AVENUE	11	0	0	11		193	6%
1991	BUIC	REGAL	17	0	0	17		255	7%
1991	BUIC	RIVIERA	2	0	0	2		29	7%
1991	BUIC	SKYLARK	7	13	0	20		198	10%
1991	CADI	BROUGHAM	8	0	0	8		48	17%
1991	CADI	DEVILLE	15	17	0	32		270	12%
1991	CADI	ELDORADO	1	5	0	6		23	26%
1991	CADI	FLEETWOOD	1	0	0	1		25	4%
1991	CADI	SEVILLE	3	5	0	8		57	14%
1991	CHEV	ASTRO VAN	8	11	0	19		184	10%
1991	CHEV	BERETTA	5	1	0	6		186	3%
1991	CHEV	BLAZER	18	23	0	41		355	12%
1991	CHEV	C1500	5	8	0	13		257	5%
1991	CHEV	CAMARO	6	0	0	6		229	3%
1991	CHEV	CAPRICE	16	0	0	16		286	6%
1991	CHEV	CAVALIER	47	45	0	92		895	10%
1991	CHEV	CORSICA	27	9	0	36		511	7%
1991	CHEV	CORVETTE	2	0	0	2		41	5%
1991	CHEV	G20	4	0	0	4		63	6%
1991	CHEV	G30	2	0	0	2		6	33%
1991	CHEV	K10	1	0	0	1		1	100%
1991	CHEV	K1500	7	3	0	10		162	6%
1991	CHEV	K2500	2	0	0	2		19	11%
1991	CHEV	LUMINA	34	22	0	56		593	9%
1991	CHEV	S10	20	16	0	36		723	5%
1991	CHEV	SUBURBAN	2	2	0	4		49	8%
1991	CHRY	LEBARON	3	0	0	3		176	2%
1991	CHRY	TOWN & COUNTRY	1	0	0	1		6	17%
1991	DODG	B250	2	1	0	3		55	5%
1991	DODG	CARAVAN	25	2	0	27		508	5%
1991	DODG	COLT	1	0	0	1		17	6%
1991	DODG	DAKOTA	3	5	0	8		197	4%
1991	DODG	DAYTONA	1	0	0	1		59	2%
1991	DODG	DYNASTY	3	0	0	3		294	1%
1991	DODG	NEON	1	0	0	1		1	100%
1991	DODG	SHADOW	3	1	0	4		222	2%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1991	DODG	SPIRIT	6	0	0	6	304	2%	
1991	DODG	STEALTH	2	2	0	4	40	10%	
1991	EGIL	TALON	3	0	0	3	85	4%	
1991	FORD	AEROSTAR	6	17	0	23	247	9%	
1991	FORD	BRONCO	1	1	0	2	41	5%	
1991	FORD	CLUB WAGON	0	1	0	1	10	10%	
1991	FORD	CROWN VICTORIA	2	9	0	11	128	9%	
1991	FORD	ECONOLINE	10	4	0	14	118	12%	
1991	FORD	ESCORT	34	41	0	75	822	9%	
1991	FORD	EXPLORER	21	44	0	65	619	11%	
1991	FORD	F150	22	45	0	67	582	12%	
1991	FORD	F250	0	6	0	6	30	20%	
1991	FORD	FESTIVA	1	4	0	5	100	5%	
1991	FORD	MUSTANG	2	1	0	3	162	2%	
1991	FORD	PROBE	10	10	0	20	206	10%	
1991	FORD	RANGER	19	23	0	42	548	8%	
1991	FORD	TAURUS	21	29	0	50	605	8%	
1991	FORD	TEMPO	11	26	0	37	542	7%	
1991	FORD	THUNDERBIRD	1	7	0	8	128	6%	
1991	GEO	METRO	0	1	0	1	130	1%	
1991	GEO	PRIZM	15	14	0	29	215	13%	
1991	GEO	STORM	4	8	0	12	107	11%	
1991	GEO	TRACKER	0	2	0	2	47	4%	
1991	GMC	C1500	0	1	0	1	1	100%	
1991	GMC	JIMMY	7	7	0	14	167	8%	
1991	GMC	R1500	2	0	0	2	17	12%	
1991	GMC	SAFARI	5	1	0	6	218	3%	
1991	GMC	SIERRA	3	5	0	8	216	4%	
1991	GMC	SONOMA	4	10	0	14	195	7%	
1991	GMC	VANDURA	11	5	0	16	216	7%	
1991	HOND	ACCORD	79	69	0	148	758	20%	
1991	HOND	CIVIC	16	25	0	41	416	10%	
1991	HOND	PRELUDE	4	1	0	5	67	7%	
1991	HYUN	SONATA	3	0	0	3	42	7%	
1991	INFI	G20	4	5	0	9	63	14%	
1991	INFI	M30	1	2	0	3	17	18%	
1991	INFI	Q45	3	5	0	8	46	17%	
1991	ISU	CAB	1	0	0	1	10	10%	
1991	ISU	RODEO	1	0	0	1	34	3%	
1991	ISU	SPACE CAB	1	0	0	1	4	25%	
1991	ISU	TROOPER	1	0	0	1	52	2%	
1991	JAGU	XJ6	4	1	0	5	21	24%	
1991	JEEP	CHEROKEE	15	18	0	33	265	12%	
1991	JEEP	COMANCHE	1	0	0	1	7	14%	
1991	JEEP	WRANGLER	3	5	0	8	74	11%	
1991	LEXS	ES 250	4	5	0	9	44	20%	
1991	LEXS	LS 400	7	8	0	15	64	23%	
1991	LINC	CONTINENTAL	2	7	0	9	110	8%	
1991	LINC	MARK VII	3	0	0	3	22	14%	
1991	LINC	TOWN CAR	12	29	0	41	290	14%	

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Screen		
1991	MAZD	323		1	2	0	3	39	8%
1991	MAZD	626		17	25	0	42	226	19%
1991	MAZD	929		1	1	0	2	26	8%
1991	MAZD	B2200		2	0	0	2	67	3%
1991	MAZD	B2600		2	0	0	2	44	5%
1991	MAZD	MPV WAGON		4	2	0	6	60	10%
1991	MAZD	MX5 MIATA		5	4	0	9	76	12%
1991	MAZD	MX6		7	4	0	11	56	20%
1991	MAZD	NAVAJO		0	4	0	4	37	11%
1991	MAZD	PROTEGE		1	0	0	1	157	1%
1991	MAZD	RX7		1	0	0	1	17	6%
1991	MERC	CAPRI		2	0	0	2	90	2%
1991	MERC	COLONY PARK		2	0	0	2	6	33%
1991	MERC	COUGAR		8	4	0	12	192	6%
1991	MERC	GRAND MARQUIS		9	23	0	32	219	15%
1991	MERC	SABLE		13	19	0	32	252	13%
1991	MERC	TOPAZ		2	11	0	13	162	8%
1991	MERC	TRACER		9	5	0	14	126	11%
1991	MERZ	190		4	2	0	6	29	21%
1991	MERZ	300		4	1	0	5	54	9%
1991	MERZ	500		1	0	0	1	6	17%
1991	MERZ	560		1	0	0	1	10	10%
1991	mits	ECLIPSE		2	4	0	6	110	5%
1991	mits	GALANT		2	0	0	2	66	3%
1991	mits	MIGHTY MAX		0	1	0	1	11	9%
1991	mits	MIRAGE		2	0	0	2	46	4%
1991	mits	MONTERO		2	0	0	2	35	6%
1991	NISS	240SX		3	0	0	3	50	6%
1991	NISS	300ZX		2	3	0	5	24	21%
1991	NISS	KING CAB		0	4	0	4	27	15%
1991	NISS	MAXIMA		18	16	0	34	194	18%
1991	NISS	PATHFINDER		4	3	0	7	30	23%
1991	NISS	SENTRA		10	15	0	25	148	17%
1991	NISS	SHORT BED		2	1	0	3	36	8%
1991	NISS	STANZA		9	8	0	17	119	14%
1991	OLDS	98		5	0	0	5	111	5%
1991	OLDS	BRAVADA		1	3	0	4	28	14%
1991	OLDS	CUTLASS		41	28	0	69	763	9%
1991	OLDS	DELTA 88		20	24	0	44	153	29%
1991	OLDS	SILHOUETTE		1	3	0	4	24	17%
1991	OLDS	TORONADO		1	0	0	1	20	5%
1991	PLYM	ACCLAIM		4	0	0	4	218	2%
1991	PLYM	ARROW		1	0	0	1	46	2%
1991	PLYM	LASER		3	1	0	4	69	6%
1991	PLYM	SUNDANCE		2	0	0	2	119	2%
1991	PLYM	VOYAGER		16	10	0	26	309	8%
1991	PONT	6000		2	0	0	2	59	3%
1991	PONT	BONNEVILLE		7	10	0	17	124	14%
1991	PONT	FIREBIRD		4	1	0	5	125	4%
1991	PONT	GRAND AM		17	20	0	37	475	8%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1991	PONT	GRAND PRIX	6	0	0	6	186	3%	
1991	PONT	LEMANS	0	1	0	1	36	3%	
1991	PONT	SUNBIRD	9	16	0	25	354	7%	
1991	PONT	TRANS SPORT	3	5	0	8	42	19%	
1991	SAA	900	0	4	0	4	31	13%	
1991	SAA	9000	1	0	0	1	10	10%	
1991	STRN	SL	2	2	0	4	187	2%	
1991	SUBA	LEGACY	9	5	0	14	84	17%	
1991	SUBA	LOYALE	2	3	0	5	30	17%	
1991	SUZI	SIDEKICK	0	1	0	1	31	3%	
1991	TOYT	4RUNNER	2	5	0	7	45	16%	
1991	TOYT	CAMRY	50	60	0	110	749	15%	
1991	TOYT	CELICA	6	14	0	20	151	13%	
1991	TOYT	COROLLA	43	51	0	94	559	17%	
1991	TOYT	CRESSIDA	0	1	0	1	5	20%	
1991	TOYT	DELUXE	6	6	0	12	97	12%	
1991	TOYT	MR2	1	3	0	4	54	7%	
1991	TOYT	PREVIA	8	14	0	22	115	19%	
1991	TOYT	SHORT BED	0	2	0	2	32	6%	
1991	TOYT	SUPRA	1	0	0	1	11	9%	
1991	TOYT	TERCEL	6	0	0	6	210	3%	
1991	VOLK	GOLF	1	0	0	1	16	6%	
1991	VOLK	JETTA	0	2	0	2	42	5%	
1991	VOLV	240	3	3	0	6	44	14%	
1991	VOLV	740	6	2	0	8	67	12%	
1991	VOLV	940	1	5	0	6	32	19%	
1990	ACUR	INTEGRA	15	31	117	163	439	37%	
1990	ACUR	LEGEND	11	0	0	11	236	5%	
1990	AUDI	100	2	0	0	2	40	5%	
1990	BMW	325I	4	6	44	54	116	47%	
1990	BMW	525I	0	6	24	30	73	41%	
1990	BMW	535I	2	4	15	21	43	49%	
1990	BMW	735I	2	1	7	10	36	28%	
1990	BMW	750IL	1	0	0	1	21	5%	
1990	BUIC	CENTURY	20	15	57	92	630	15%	
1990	BUIC	ELECTRA	15	0	0	15	182	8%	
1990	BUIC	LESABRE	42	0	0	42	790	5%	
1990	BUIC	REATTA	1	0	0	1	30	3%	
1990	BUIC	REGAL	9	15	40	64	233	27%	
1990	BUIC	RIVIERA	6	0	0	6	111	5%	
1990	BUIC	SKYLARK	10	0	0	10	472	2%	
1990	CADI	BROUGHAM	3	0	0	3	147	2%	
1990	CADI	DEVILLE	25	0	0	25	756	3%	
1990	CADI	ELDORADO	7	0	0	7	88	8%	
1990	CADI	FLEETWOOD	7	0	0	7	140	5%	
1990	CADI	SEVILLE	3	0	0	3	165	2%	
1990	CHEV	ASTRO VAN	11	0	0	11	471	2%	
1990	CHEV	BERETTA	10	2	12	24	444	5%	
1990	CHEV	BLAZER	7	8	54	69	296	23%	
1990	CHEV	C10	1	0	1	2	2	100%	

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1990	CHEV	C1500	11	3	22	36	761	5%	
1990	CHEV	C2500	2	2	7	11	48	23%	
1990	CHEV	CAMARO	4	0	0	4	156	3%	
1990	CHEV	CAPRICE	5	8	16	29	319	9%	
1990	CHEV	CAVALIER	40	58	257	355	1545	23%	
1990	CHEV	CELEBRITY	8	0	0	8	222	4%	
1990	CHEV	CORSICA	29	32	90	151	889	17%	
1990	CHEV	CORVETTE	1	0	0	1	124	1%	
1990	CHEV	G20	4	0	0	4	229	2%	
1990	CHEV	G30	1	0	0	1	12	8%	
1990	CHEV	K1500	4	5	24	33	424	8%	
1990	CHEV	K2500	2	0	8	10	60	17%	
1990	CHEV	LUMINA	36	15	75	126	1580	8%	
1990	CHEV	PRIZM	0	2	2	4	6	67%	
1990	CHEV	S10	5	10	39	54	306	18%	
1990	CHEV	SUBURBAN	9	0	0	9	240	4%	
1990	CHRY	LEBARON	5	0	0	5	440	1%	
1990	CHRY	NEW YORKER	4	0	0	4	306	1%	
1990	DAIH	ROCKY	1	0	0	1	6	17%	
1990	DODG	CARAVAN	16	0	0	16	1183	1%	
1990	DODG	COLT	0	0	4	4	14	29%	
1990	DODG	D-150	1	0	0	1	221	0%	
1990	DODG	DAKOTA	4	3	11	18	389	5%	
1990	DODG	DAYTONA	0	0	8	8	203	4%	
1990	DODG	DYNASTY	6	0	0	6	546	1%	
1990	DODG	MONACO	1	0	0	1	24	4%	
1990	DODG	OMNI	1	0	0	1	94	1%	
1990	DODG	RAM WAGON	1	0	0	1	1	100%	
1990	DODG	SHADOW	2	0	0	2	341	1%	
1990	DODG	SPIRIT	4	0	0	4	378	1%	
1990	DODG	W-150	1	0	0	1	73	1%	
1990	DODG	W-250	1	0	0	1	16	6%	
1990	EGIL	SUMMIT	0	0	2	2	29	7%	
1990	EGIL	TALON	2	1	2	5	95	5%	
1990	FORD	AEROSTAR	7	9	49	65	588	11%	
1990	FORD	BRONCO	7	0	0	7	209	3%	
1990	FORD	BRONCO II	1	5	46	52	192	27%	
1990	FORD	CLUB WAGON	2	0	0	2	35	6%	
1990	FORD	CROWN VICTORIA	2	0	0	2	279	1%	
1990	FORD	ECONOLINE	9	1	6	16	381	4%	
1990	FORD	ESCORT	0	27	144	171	737	23%	
1990	FORD	F150	49	34	154	237	1425	17%	
1990	FORD	F250	6	1	6	13	84	15%	
1990	FORD	FESTIVA	2	10	57	69	198	35%	
1990	FORD	MUSTANG	7	0	0	7	503	1%	
1990	FORD	PROBE	12	38	158	208	524	40%	
1990	FORD	RANGER	6	22	154	182	1086	17%	
1990	FORD	TAURUS	19	72	282	373	1326	28%	
1990	FORD	TEMPO	18	47	274	339	1218	28%	
1990	FORD	THUNDERBIRD	6	19	87	112	314	36%	

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1990	GEO	PRIZM	31	54	250	335	888	38%	
1990	GEO	STORM	5	0	0	5	198	3%	
1990	GEO	TRACKER	1	0	0	1	140	1%	
1990	GMC	G2500	1	0	0	1	6	17%	
1990	GMC	JIMMY	4	1	10	15	95	16%	
1990	GMC	R1500	2	6	16	24	81	30%	
1990	GMC	R2500	1	0	0	1	1	100%	
1990	GMC	S15	1	0	0	1	79	1%	
1990	GMC	SAFARI	8	0	0	8	418	2%	
1990	GMC	SIERRA	11	6	48	65	543	12%	
1990	GMC	SONOMA	1	0	0	1	1	100%	
1990	GMC	V1500	0	1	14	15	56	27%	
1990	GMC	V2500	1	0	0	1	6	17%	
1990	GMC	VANDURA	15	0	0	15	676	2%	
1990	HOND	ACCORD	92	148	289	529	1635	32%	
1990	HOND	CIVIC	17	48	207	272	903	30%	
1990	HOND	PRELUDE	4	6	22	32	124	26%	
1990	INFI	M30	2	0	0	2	40	5%	
1990	INFI	Q45	2	13	18	33	60	55%	
1990	ISU	AMIGO	0	0	6	6	22	27%	
1990	ISU	CAB	1	0	2	3	24	13%	
1990	ISU	IMPULSE	0	3	2	5	10	50%	
1990	ISU	TROOPER	1	0	0	1	80	1%	
1990	JAGU	VDP	0	0	1	1	8	13%	
1990	JAGU	XJ6	0	3	14	17	53	32%	
1990	JEEP	CHEROKEE	6	24	121	151	576	26%	
1990	JEEP	COMANCHE	0	0	3	3	25	12%	
1990	LEXS	ES 250	6	0	0	6	107	6%	
1990	LEXS	LS 400	15	25	47	87	178	49%	
1990	LINC	CONTINENTAL	15	0	0	15	326	5%	
1990	LINC	MARK VII	5	9	12	26	92	28%	
1990	LINC	TOWN CAR	22	56	118	196	686	29%	
1990	LNDR	RANGE ROVER	1	0	0	1	12	8%	
1990	MAZD	323	0	4	31	35	100	35%	
1990	MAZD	626	7	28	135	170	415	41%	
1990	MAZD	929	3	8	26	37	75	49%	
1990	MAZD	B2200	1	7	57	65	273	24%	
1990	MAZD	MPV WAGON	4	3	12	19	159	12%	
1990	MAZD	MX5 MIATA	10	19	111	140	335	42%	
1990	MAZD	MX6	11	10	61	82	174	47%	
1990	MAZD	PROTEGE	4	5	36	45	219	21%	
1990	MERC	COLONY PARK	1	1	6	8	22	36%	
1990	MERC	COUGAR	7	29	65	101	384	26%	
1990	MERC	GRAND MARQUIS	8	30	86	124	341	36%	
1990	MERC	SABLE	7	17	94	118	392	30%	
1990	MERC	TOPAZ	2	9	112	123	375	33%	
1990	MERZ	190	3	2	2	7	27	26%	
1990	MERZ	260	0	0	3	3	3	100%	
1990	MERZ	300	8	7	14	29	98	30%	
1990	MERZ	420	1	0	5	6	9	67%	

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Screen		
1990	MERZ	500	2	0	2	4		8	50%
1990	MERZ	560	0	2	6	8		16	50%
1990	MITS	ECLIPSE	2	4	26	32		168	19%
1990	MITS	GALANT	4	0	0	4		135	3%
1990	NISS	240SX	9	0	0	9		194	5%
1990	NISS	300ZX	2	7	23	32		158	20%
1990	NISS	720	1	7	57	65		184	35%
1990	NISS	AXXESS	0	2	9	11		40	28%
1990	NISS	KING CAB	1	0	3	4		4	100%
1990	NISS	MAXIMA	27	36	116	179		446	40%
1990	NISS	PATHFINDER	3	6	21	30		62	48%
1990	NISS	PULSAR	1	0	0	1		6	17%
1990	NISS	SENTRA	2	6	31	39		282	14%
1990	NISS	STANDARD	0	0	1	1		2	50%
1990	NISS	STANZA	5	11	49	65		229	28%
1990	OLDS	98	17	7	35	59		298	20%
1990	OLDS	CIERA	0	1	1	2		6	33%
1990	OLDS	CUTLASS	45	22	130	197		1651	12%
1990	OLDS	DELTA 88	35	0	0	35		700	5%
1990	OLDS	SILHOUETTE	2	0	0	2		95	2%
1990	OLDS	TORONADO	3	0	0	3		70	4%
1990	PLYM	ACCLAIM	6	0	0	6		276	2%
1990	PLYM	ARROW	3	0	0	3		134	2%
1990	PLYM	HORIZON	2	0	0	2		73	3%
1990	PLYM	LASER	4	3	16	23		156	15%
1990	PLYM	SUNDANCE	6	0	0	6		187	3%
1990	PLYM	VOYAGER	13	0	5	18		764	2%
1990	PONT	6000	4	0	12	16		192	8%
1990	PONT	BONNEVILLE	15	6	12	33		328	10%
1990	PONT	FIREBIRD	3	0	0	3		95	3%
1990	PONT	GRAND AM	4	0	0	4		751	1%
1990	PONT	GRAND PRIX	20	0	0	20		444	5%
1990	PONT	LEMANS	1	0	2	3		57	5%
1990	PONT	SUNBIRD	7	3	6	16		439	4%
1990	PONT	TRANS SPORT	6	8	25	39		109	36%
1990	PORS	911	1	0	0	1		20	5%
1990	PORS	928	1	0	0	1		2	50%
1990	SAA	900	3	4	4	11		44	25%
1990	SAA	9000	2	1	0	3		16	19%
1990	SUBA		0	0	3	3		5	60%
1990	SUBA	LEGACY	10	23	38	71		208	34%
1990	SUBA	LOYALE	1	0	3	4		49	8%
1990	SUZI	SIDEKICK	0	0	8	8		35	23%
1990	SUZI	SWIFT	1	0	4	5		21	24%
1990	TOYT	4RUNNER	3	9	50	62		156	40%
1990	TOYT	CAMRY	52	112	412	576		1656	35%
1990	TOYT	CARINA	2	7	24	33		34	97%
1990	TOYT	CELICA	17	10	80	107		473	23%
1990	TOYT	COROLLA	49	85	450	584		1374	43%
1990	TOYT	DELUXE	2	9	48	59		144	41%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Screen		
1990	TOYT	SHORT BED	1	2	20	23		59	39%
1990	TOYT	SR5	0	0	13	13		28	46%
1990	TOYT	SUPRA	2	0	0	2		38	5%
1990	TOYT	TERCEL	10	0	0	10		354	3%
1990	VOLK	CABRIOLET	0	1	6	7		37	19%
1990	VOLK	FOX	1	4	12	17		66	26%
1990	VOLK	GOLF	0	0	11	11		26	42%
1990	VOLK	JETTA	1	1	14	16		90	18%
1990	VOLK	PASSAT	1	0	0	1		40	3%
1990	VOLV	240	8	15	52	75		152	49%
1990	VOLV	740	19	27	61	107		281	38%
1990	VOLV	760	3	3	10	16		41	39%
1989	ACUR	INTEGRA	1	2	0	3		49	6%
1989	ACUR	LEGEND	4	0	0	4		70	6%
1989	AUDI	100	1	0	0	1		17	6%
1989	BMW	325I	2	4	0	6		53	11%
1989	BMW	525I	2	0	0	2		17	12%
1989	BMW	535I	0	2	0	2		10	20%
1989	BMW	735I	4	1	0	5		14	36%
1989	BMW	750IL	0	2	0	2		6	33%
1989	BUIC	CENTURY	10	14	0	24		240	10%
1989	BUIC	ELECTRA	13	9	0	22		158	14%
1989	BUIC	LESABRE	26	22	0	48		297	16%
1989	BUIC	REATTA	3	1	0	4		16	25%
1989	BUIC	REGAL	5	0	0	5		136	4%
1989	BUIC	RIVIERA	2	3	0	5		32	16%
1989	BUIC	SKYLARK	5	0	0	5		99	5%
1989	CADI	ALLANTE	1	0	0	1		10	10%
1989	CADI	BROUGHAM	2	0	0	2		74	3%
1989	CADI	DEVILLE	10	0	0	10		275	4%
1989	CADI	ELDORADO	2	3	0	5		47	11%
1989	CADI	FLEETWOOD	3	0	0	3		57	5%
1989	CADI	SEVILLE	1	3	0	4		65	6%
1989	CHEV	ASTRO VAN	5	0	0	5		197	3%
1989	CHEV	BERETTA	18	7	0	25		327	8%
1989	CHEV	BLAZER	7	2	0	9		296	3%
1989	CHEV	C1500	6	13	0	19		321	6%
1989	CHEV	C20	1	0	0	1		2	50%
1989	CHEV	C2500	1	0	0	1		23	4%
1989	CHEV	CAMARO	3	0	0	3		182	2%
1989	CHEV	CAPRICE	12	0	0	12		249	5%
1989	CHEV	CAVALIER	15	17	0	32		635	5%
1989	CHEV	CELEBRITY	14	6	0	20		411	5%
1989	CHEV	CORSICA	19	8	0	27		407	7%
1989	CHEV	CORVETTE	1	4	0	5		41	12%
1989	CHEV	G20	4	0	0	4		102	4%
1989	CHEV	G30	1	0	0	1		6	17%
1989	CHEV	K1500	2	0	0	2		195	1%
1989	CHEV	K2500	0	1	0	1		29	3%
1989	CHEV	S10	7	5	0	12		425	3%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Screen		
1989	CHEV	SUBURBAN	4	0	0	4		97	4%
1989	CHRY	FIFTH AVENUE	1	0	0	1		28	4%
1989	CHRY	LEBARON	2	6	0	8		159	5%
1989	CHRY	T-C BY MASERATI	1	1	0	2		9	22%
1989	DODG	ARIES	2	0	0	2		92	2%
1989	DODG	B250	4	0	0	4		72	6%
1989	DODG	CARAVAN	3	0	0	3		358	1%
1989	DODG	COLT	0	2	0	2		32	6%
1989	DODG	D-100	3	0	0	3		59	5%
1989	DODG	D-150	1	0	0	1		44	2%
1989	DODG	DAKOTA	3	5	0	8		194	4%
1989	DODG	DAYTONA	2	2	0	4		144	3%
1989	DODG	DYNASTY	3	0	0	3		273	1%
1989	DODG	OMNI	1	4	0	5		64	8%
1989	DODG	RAIDER	1	0	0	1		15	7%
1989	DODG	SHADOW	0	1	0	1		132	1%
1989	FORD	AEROSTAR	5	9	0	14		307	5%
1989	FORD	BRONCO	2	5	0	7		103	7%
1989	FORD	BRONCO II	0	5	0	5		140	4%
1989	FORD	CLUB WAGON	1	1	0	2		32	6%
1989	FORD	CROWN VICTORIA	4	13	0	17		250	7%
1989	FORD	ECONOLINE	4	4	0	8		156	5%
1989	FORD	ESCORT	3	9	0	12		432	3%
1989	FORD	F150	14	17	0	31		645	5%
1989	FORD	F250	1	1	0	2		58	3%
1989	FORD	FESTIVA	1	0	0	1		61	2%
1989	FORD	MUSTANG	8	9	0	17		344	5%
1989	FORD	PROBE	13	24	0	37		317	12%
1989	FORD	RANGER	3	4	0	7		404	2%
1989	FORD	TAURUS	6	28	0	34		537	6%
1989	FORD	TEMPO	3	21	0	24		412	6%
1989	FORD	THUNDERBIRD	4	11	0	15		165	9%
1989	GEO	METRO	1	0	0	1		16	6%
1989	GEO	PRIZM	1	0	0	1		8	13%
1989	GMC	JIMMY	5	0	0	5		134	4%
1989	GMC	R1500	3	0	0	3		22	14%
1989	GMC	S15	3	0	0	3		108	3%
1989	GMC	SAFARI	3	0	0	3		111	3%
1989	GMC	SIERRA	7	1	0	8		224	4%
1989	GMC	SONOMA	1	1	0	2		2	100%
1989	GMC	VANDURA	7	0	0	7		167	4%
1989	HOND	ACCORD	28	45	0	73		566	13%
1989	HOND	CIVIC	12	17	0	29		342	8%
1989	HOND	PRELUDE	3	6	0	9		118	8%
1989	ISU	TROOPER	1	1	0	2		33	6%
1989	JAGU	VDP	0	2	0	2		8	25%
1989	JAGU	XJ6	1	4	0	5		20	25%
1989	JAGU	XJS	1	0	0	1		12	8%
1989	JEEP	CHEROKEE	6	15	0	21		224	9%
1989	JEEP	COMANCHE	5	3	0	8		26	31%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Total Rapid Screen %
1989	JEEP	WAGONEER	2	0	0	2	26	8%
1989	JEEP	WRANGLER	1	0	0	1	66	2%
1989	LINC	CONTINENTAL	3	2	0	5	67	7%
1989	LINC	MARK VII	2	5	0	7	44	16%
1989	LINC	TOWN CAR	6	16	0	22	242	9%
1989	MAZD	323	3	7	0	10	138	7%
1989	MAZD	626	8	10	0	18	148	12%
1989	MAZD	929	2	2	0	4	47	9%
1989	MAZD	MPV WAGON	3	8	0	11	58	19%
1989	MAZD	MX-6	3	7	0	10	77	13%
1989	MERC	COLONY PARK	1	4	0	5	26	19%
1989	MERC	COUGAR	8	10	0	18	162	11%
1989	MERC	GRAND MARQUIS	10	15	0	25	282	9%
1989	MERC	SABLE	3	12	0	15	161	9%
1989	MERC	TOPAZ	3	4	0	7	144	5%
1989	MERC	TRACER	1	4	0	5	72	7%
1989	MERK	SCORPIO	1	0	0	1	7	14%
1989	MERZ	260	1	0	0	1	7	14%
1989	MERZ	300	4	0	0	4	36	11%
1989	MERZ	420	2	0	0	2	12	17%
1989	MERZ	560	0	3	0	3	14	21%
1989	MITS	GALANT	1	1	0	2	48	4%
1989	NISS	240SX	5	0	0	5	78	6%
1989	NISS	300ZX	1	0	0	1	7	14%
1989	NISS	720	2	2	0	4	45	9%
1989	NISS	KING CAB	0	1	0	1	1	100%
1989	NISS	LONG BED	1	0	0	1	1	100%
1989	NISS	MAXIMA	17	12	0	29	139	21%
1989	NISS	PATHFINDER	0	1	0	1	13	8%
1989	NISS	PULSAR	0	2	0	2	28	7%
1989	NISS	SENTRA	2	10	0	12	161	7%
1989	OLDS	98	16	15	0	31	179	17%
1989	OLDS	CUTLASS	35	16	0	51	862	6%
1989	OLDS	DELTA 88	29	38	0	67	378	18%
1989	OLDS	TORONADO	3	0	0	3	15	20%
1989	PLYM	ARROW	0	1	0	1	38	3%
1989	PLYM	COLT	0	1	0	1	30	3%
1989	PLYM	HORIZON	1	0	0	1	58	2%
1989	PLYM	RELIANT	1	0	0	1	100	1%
1989	PLYM	SUNDANCE	1	0	0	1	81	1%
1989	PLYM	VOYAGER	5	2	0	7	273	3%
1989	PONT	6000	2	1	0	3	118	3%
1989	PONT	BONNEVILLE	18	18	0	36	213	17%
1989	PONT	FIREBIRD	6	2	0	8	134	6%
1989	PONT	GRAND AM	2	8	0	10	293	3%
1989	PONT	GRAND PRIX	7	0	0	7	163	4%
1989	PONT	SUNBIRD	1	3	0	4	139	3%
1989	PORS	928	0	1	0	1	6	17%
1989	SAA	900	1	2	0	3	35	9%
1989	SAA	9000	0	1	0	1	14	7%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Screen		
1989	SUBA	GL	0	1	0	1	18	6%	
1989	TOYT	4RUNNER	1	2	0	3	24	13%	
1989	TOYT	CAMRY	20	49	0	69	635	11%	
1989	TOYT	CELICA	7	9	0	16	162	10%	
1989	TOYT	COROLLA	8	23	0	31	455	7%	
1989	TOYT	CRESSIDA	2	2	0	4	48	8%	
1989	TOYT	DELUXE	6	11	0	17	130	13%	
1989	TOYT	SHORT BED	1	0	0	1	25	4%	
1989	TOYT	SR5	2	1	0	3	14	21%	
1989	TOYT	SUPRA	3	1	0	4	40	10%	
1989	TOYT	TERCEL	4	15	0	19	150	13%	
1989	TOYT	VAN WAGON	0	1	0	1	17	6%	
1989	TOYT	XTRACAB	0	1	0	1	9	11%	
1989	VOLK	CABRIOLET	1	0	0	1	20	5%	
1989	VOLK	FOX	0	1	0	1	28	4%	
1989	VOLK	JETTA	0	1	0	1	27	4%	
1989	VOLV	240	9	5	0	14	72	19%	
1989	VOLV	740	3	8	0	11	84	13%	
1988	ACUR	3.0 CL	2	1	1	4	5	80%	
1988	ACUR	INTEGRA	0	7	30	37	140	26%	
1988	ACUR	LEGEND	12	0	0	12	245	5%	
1988	AUDI	5000	2	0	0	2	31	6%	
1988	AUDI	80	2	0	0	2	23	9%	
1988	BMW	325I	3	8	29	40	107	37%	
1988	BMW	528I	4	0	0	4	43	9%	
1988	BMW	535I	1	0	0	1	27	4%	
1988	BMW	635 CSI	1	2	0	3	16	19%	
1988	BMW	735I	4	8	6	18	47	38%	
1988	BMW	M5	1	0	0	1	9	11%	
1988	BMW	M6	1	0	0	1	3	33%	
1988	BUIC	CENTURY	4	5	13	22	296	7%	
1988	BUIC	ELECTRA	17	0	2	19	370	5%	
1988	BUIC	LESABRE	14	2	4	20	406	5%	
1988	BUIC	REATTA	1	1	5	7	23	30%	
1988	BUIC	REGAL	13	0	0	13	384	3%	
1988	CADI	BROUGHAM	1	0	0	1	170	1%	
1988	CADI	DEVILLE	8	0	0	8	455	2%	
1988	CADI	FLEETWOOD	1	0	0	1	63	2%	
1988	CADI	SEVILLE	3	0	0	3	90	3%	
1988	CHEV	ASTRO VAN	6	0	0	6	434	1%	
1988	CHEV	BERETTA	13	0	0	13	498	3%	
1988	CHEV	BLAZER	4	0	0	4	429	1%	
1988	CHEV	C1500	21	0	0	21	814	3%	
1988	CHEV	C20	1	0	0	1	3	33%	
1988	CHEV	C2500	2	0	0	2	92	2%	
1988	CHEV	CAMARO	3	0	0	3	267	1%	
1988	CHEV	CAPRICE	8	0	0	8	526	2%	
1988	CHEV	CAVALIER	13	0	0	13	841	2%	
1988	CHEV	CELEBRITY	18	0	0	18	1050	2%	
1988	CHEV	CORSICA	14	0	0	14	654	2%	

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Total Rapid Screen %
1988	CHEV	CORVETTE	1	0	0	1	80	1%
1988	CHEV	G20	2	0	0	2	209	1%
1988	CHEV	K1500	3	2	9	14	288	5%
1988	CHEV	K2500	0	2	14	16	109	15%
1988	CHEV	NOVA	3	11	74	88	409	22%
1988	CHEV	S10	7	7	18	32	786	4%
1988	CHEV	SUBURBAN	3	0	0	3	228	1%
1988	CHRY	FIFTH AVENUE	1	0	0	1	133	1%
1988	CHRY	LEBARON	4	3	12	19	365	5%
1988	CHRY	NEW YORKER	2	0	0	2	261	1%
1988	DAIH	CHARADE	0	0	1	1	3	33%
1988	DODG	ARIES	6	0	0	6	377	2%
1988	DODG	B250	5	0	0	5	141	4%
1988	DODG	CARAVAN	7	0	0	7	570	1%
1988	DODG	D-100	1	0	0	1	114	1%
1988	DODG	D-150	3	0	0	3	80	4%
1988	DODG	DAKOTA	4	0	0	4	356	1%
1988	DODG	DAYTONA	1	0	0	1	145	1%
1988	DODG	DYNASTY	5	0	0	5	213	2%
1988	DODG	LANCER	1	0	0	1	38	3%
1988	DODG	OMNI	4	6	45	55	205	27%
1988	DODG	SHADOW	1	0	4	5	205	2%
1988	DODG	W-150	1	2	1	4	34	12%
1988	DODG	W-250	1	0	0	1	10	10%
1988	FORD	AEROSTAR	6	1	1	8	388	2%
1988	FORD	BRONCO	2	1	8	11	157	7%
1988	FORD	BRONCO II	4	0	0	4	305	1%
1988	FORD	CLUB WAGON	2	0	0	2	60	3%
1988	FORD	CROWN VICTORIA	6	0	0	6	469	1%
1988	FORD	ECONOLINE	0	3	14	17	347	5%
1988	FORD	ESCORT	1	0	0	1	939	0%
1988	FORD	F150	13	1	2	16	1056	2%
1988	FORD	F250	4	0	0	4	117	3%
1988	FORD	FESTIVA	2	0	0	2	124	2%
1988	FORD	MUSTANG	10	0	0	10	491	2%
1988	FORD	RANGER	12	0	0	12	919	1%
1988	FORD	TAURUS	12	0	0	12	979	1%
1988	FORD	TEMPO	4	16	100	120	575	21%
1988	FORD	THUNDERBIRD	10	0	0	10	421	2%
1988	GMC	C1500	7	16	41	64	340	19%
1988	GMC	JIMMY	6	0	0	6	253	2%
1988	GMC	K1500	4	0	0	4	151	3%
1988	GMC	K2500	1	0	0	1	50	2%
1988	GMC	S15	3	0	0	3	258	1%
1988	GMC	SAFARI	2	0	0	2	205	1%
1988	GMC	VANDURA	9	19	99	127	445	29%
1988	HOND	ACCORD	30	79	317	426	1213	35%
1988	HOND	CIVIC	5	24	124	153	555	28%
1988	HOND	PRELUDE	2	2	5	9	176	5%
1988	HYUN	EXCEL	1	0	0	1	76	1%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1988	ISU	TROOPER		1	0	0	1	76	1%
1988	JAGU	VDP		0	2	2	4	17	24%
1988	JAGU	XJ6		3	8	10	21	57	37%
1988	JEEP	CHEROKEE		8	4	15	27	395	7%
1988	LINC	MARK VII		2	0	0	2	71	3%
1988	LINC	TOWN CAR		12	0	0	12	764	2%
1988	LNDR	RANGE ROVER		1	0	0	1	14	7%
1988	MAZD	323		6	13	72	91	348	26%
1988	MAZD	626		12	27	121	160	365	44%
1988	MAZD	929		5	0	0	5	94	5%
1988	MAZD	MX-6		3	7	36	46	117	39%
1988	MAZD	MX6		1	3	14	18	56	32%
1988	MAZD	RX7		1	0	0	1	111	1%
1988	MERC	COLONY PARK		0	1	17	18	56	32%
1988	MERC	COUGAR		9	7	26	42	525	8%
1988	MERC	GRAND MARQUIS		8	23	134	165	490	34%
1988	MERC	SABLE		4	0	0	4	308	1%
1988	MERC	TOPAZ		1	4	16	21	125	17%
1988	MERC	TRACER		1	0	0	1	149	1%
1988	MERK	MERKUR XR4TI		1	0	0	1	12	8%
1988	MERZ	260		2	0	0	2	23	9%
1988	MERZ	300		2	0	0	2	72	3%
1988	MERZ	420		1	0	0	1	16	6%
1988	MERZ	560		2	5	16	23	66	35%
1988	IMIT	MIGHTY MAX		1	0	0	1	31	3%
1988	IMIT	WAGON		1	0	0	1	9	11%
1988	NISS	200SX		1	0	0	1	39	3%
1988	NISS	300ZX		1	0	0	1	54	2%
1988	NISS	720		1	4	16	21	89	24%
1988	NISS	MAXIMA		4	0	0	4	152	3%
1988	NISS	PATHFINDER		1	0	0	1	51	2%
1988	NISS	STANZA		2	1	4	7	64	11%
1988	OLDS	98		17	6	17	40	287	14%
1988	OLDS	CUTLASS		32	17	46	95	1684	6%
1988	OLDS	DELTA 88		23	0	0	23	575	4%
1988	OLDS	TORONADO		2	0	0	2	58	3%
1988	PLYM	CARAVELLE		0	1	7	8	41	20%
1988	PLYM	HORIZON		2	0	0	2	167	1%
1988	PLYM	RELIANT		6	0	0	6	443	1%
1988	PLYM	VOYAGER		6	0	0	6	469	1%
1988	PONT	6000		4	0	0	4	207	2%
1988	PONT	BONNEVILLE		12	0	0	12	275	4%
1988	PONT	FIERO		0	1	5	6	46	13%
1988	PONT	FIREBIRD		2	2	8	12	202	6%
1988	PONT	GRAND AM		5	0	1	6	494	1%
1988	PONT	GRAND PRIX		6	0	0	6	173	3%
1988	PONT	SUNBIRD		1	1	8	10	152	7%
1988	PORS	911		0	3	7	10	34	29%
1988	PORS	928		1	0	0	1	8	13%
1988	PORS	944		0	2	3	5	27	19%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Screen		
1988	SAA	900	2	4	3	9		76	12%
1988	SAA	9000	1	1	3	5		23	22%
1988	SUBA	DL	0	2	7	9		16	56%
1988	SUBA	GL	2	5	11	18		54	33%
1988	SUBA	JUSTY	0	1	4	5		19	26%
1988	SUBA	XT	0	0	3	3		8	38%
1988	SUZI	SAMURAI	0	0	38	38		174	22%
1988	TOYT	1/2 TON	2	2	38	42		132	32%
1988	TOYT	4RUNNER	1	8	27	36		85	42%
1988	TOYT	CAMRY	34	49	210	293		1152	25%
1988	TOYT	CELICA	5	15	59	79		317	25%
1988	TOYT	COROLLA	14	36	141	191		901	21%
1988	TOYT	DELUXE	1	2	18	21		46	46%
1988	TOYT	LAND CRUISER	0	0	6	6		13	46%
1988	TOYT	MR2	1	2	10	13		40	33%
1988	TOYT	SHORT BED	0	3	27	30		96	31%
1988	TOYT	SHORT BED STD	0	1	4	5		10	50%
1988	TOYT	SR5	0	3	6	9		25	36%
1988	TOYT	SUPRA	3	0	0	3		63	5%
1988	TOYT	TERCEL	8	2	2	12		260	5%
1988	TOYT	VAN WAGON	0	0	5	5		19	26%
1988	VOLK	CABRIOLET	0	1	6	7		36	19%
1988	VOLK	FOX	1	5	6	12		63	19%
1988	VOLK	GOLF	0	0	4	4		27	15%
1988	VOLK	JETTA	0	0	1	1		76	1%
1988	VOLK	SCIROCCO	0	0	3	3		5	60%
1988	VOLV	240	2	0	0	2		139	1%
1988	VOLV	740	6	0	0	6		194	3%
1988	VOLV	760	1	0	0	1		35	3%
1987	ACUR	INTEGRA	2	6	0	8		51	16%
1987	ACUR	LEGEND	2	2	0	4		54	7%
1987	AMER	CHEROKEE	2	3	0	5		114	4%
1987	AUDI	5000	2	0	0	2		39	5%
1987	BMW	325I	4	5	0	9		71	13%
1987	BMW	528I	2	5	0	7		12	58%
1987	BUIC	CENTURY	2	2	0	4		171	2%
1987	BUIC	ELECTRA	6	1	0	7		97	7%
1987	BUIC	LESABRE	11	8	0	19		191	10%
1987	BUIC	REGAL	1	0	0	1		85	1%
1987	BUIC	SKYHAWK	0	1	0	1		45	2%
1987	BUIC	SKYLARK	1	0	0	1		24	4%
1987	BUIC	SOMERSET	2	0	0	2		36	6%
1987	CADI	DEVILLE	4	0	0	4		179	2%
1987	CHEV	ASTRO VAN	4	0	0	4		181	2%
1987	CHEV	BLAZER	0	7	0	7		216	3%
1987	CHEV	CAMARO	1	0	0	1		155	1%
1987	CHEV	CAPRICE	8	0	0	8		238	3%
1987	CHEV	CAVALIER	3	1	0	4		292	1%
1987	CHEV	CELEBRITY	12	4	0	16		392	4%
1987	CHEV	CORVETTE	1	0	0	1		39	3%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1987	CHEV	EL CAMINO	1	0	0	1	1	15	7%
1987	CHEV	G20	4	0	0	4	4	87	5%
1987	CHEV	G30	1	0	0	1	1	4	25%
1987	CHEV	MONTE CARLO	1	0	0	1	1	129	1%
1987	CHEV	NOVA	0	6	0	6	6	213	3%
1987	CHEV	R10	1	0	0	1	1	145	1%
1987	CHEV	S10	2	2	0	4	4	249	2%
1987	CHEV	SUBURBAN	5	0	0	5	5	88	6%
1987	CHEV	V10	0	2	0	2	2	74	3%
1987	CHRY	FIFTH AVENUE	3	0	0	3	3	103	3%
1987	CHRY	LEBARON	4	2	0	6	6	174	3%
1987	DODG	ARIES	1	3	0	4	4	86	5%
1987	DODG	B150	1	0	0	1	1	27	4%
1987	DODG	B250	2	0	0	2	2	67	3%
1987	DODG	CARAVAN	1	0	0	1	1	106	1%
1987	DODG	D-100	1	1	0	2	2	43	5%
1987	DODG	D-150	0	1	0	1	1	81	1%
1987	DODG	DAKOTA	2	0	0	2	2	230	1%
1987	DODG	DAYTONA	1	0	0	1	1	39	3%
1987	DODG	RAIDER	1	0	0	1	1	11	9%
1987	DODG	RAM 50	0	1	0	1	1	31	3%
1987	DODG	RAMCHARGER	1	0	0	1	1	38	3%
1987	FORD	AEROSTAR	1	0	0	1	1	144	1%
1987	FORD	BRONCO II	1	0	0	1	1	98	1%
1987	FORD	CLUB WAGON	1	0	0	1	1	18	6%
1987	FORD	CROWN VICTORIA	3	0	0	3	3	164	2%
1987	FORD	ECONOLINE	5	0	0	5	5	173	3%
1987	FORD	ESCORT	1	0	0	1	1	319	0%
1987	FORD	F150	8	12	0	20	20	483	4%
1987	FORD	MUSTANG	1	2	0	3	3	133	2%
1987	FORD	RANGER	2	0	0	2	2	297	1%
1987	FORD	TAURUS	4	0	0	4	4	315	1%
1987	FORD	TEMPO	2	0	0	2	2	169	1%
1987	FORD	THUNDERBIRD	3	0	0	3	3	91	3%
1987	GMC	R1500	2	4	0	6	6	79	8%
1987	GMC	S15	3	1	0	4	4	99	4%
1987	GMC	SAFARI	2	1	0	3	3	66	5%
1987	GMC	V1500	1	0	0	1	1	48	2%
1987	GMC	VANDURA	4	0	0	4	4	162	2%
1987	HOND	ACCORD	11	18	0	29	29	365	8%
1987	HOND	CIVIC	1	5	0	6	6	184	3%
1987	HOND	PRELUDE	2	1	0	3	3	51	6%
1987	INFI	I30	1	0	0	1	1	1	100%
1987	JEEP	CHEROKEE	2	1	0	3	3	3	100%
1987	JEEP	WAGONEER	0	1	0	1	1	2	50%
1987	LINC	MARK VII	1	0	0	1	1	14	7%
1987	LINC	TOWN CAR	4	0	0	4	4	118	3%
1987	MAZD	323	3	2	0	5	5	78	6%
1987	MAZD	626	3	5	0	8	8	93	9%
1987	MAZD	B2000	3	0	0	3	3	146	2%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1987	MAZD	RX7	1	0	0	1	39	3%	
1987	MERC	COUGAR	2	0	0	2	120	2%	
1987	MERC	GRAND MARQUIS	3	0	0	3	214	1%	
1987	MERC	SABLE	1	0	0	1	115	1%	
1987	MERZ	300	1	0	0	1	26	4%	
1987	MERZ	420	3	0	0	3	14	21%	
1987	MERZ	560	0	1	0	1	29	3%	
1987	NISS	300ZX	1	0	0	1	33	3%	
1987	NISS	720	1	4	0	5	94	5%	
1987	NISS	MAXIMA	7	0	0	7	164	4%	
1987	NISS	SENTRA	1	0	0	1	133	1%	
1987	NISS	STANZA	2	0	0	2	78	3%	
1987	NISS	VAN	0	1	0	1	2	50%	
1987	OLDS	98	4	0	0	4	102	4%	
1987	OLDS	CALAIS	1	0	0	1	78	1%	
1987	OLDS	CUTLASS	13	4	0	17	624	3%	
1987	OLDS	DELTA 88	10	15	0	25	197	13%	
1987	OLDS	TORONADO	1	0	0	1	21	5%	
1987	PLYM	CARAVELLE	1	0	0	1	51	2%	
1987	PLYM	RELIANT	0	4	0	4	93	4%	
1987	PLYM	SUNDANCE	1	0	0	1	44	2%	
1987	PLYM	VOYAGER	0	1	0	1	94	1%	
1987	PONT	6000	3	2	0	5	101	5%	
1987	PONT	BONNEVILLE	2	8	0	10	98	10%	
1987	PONT	FIREBIRD	2	0	0	2	98	2%	
1987	PONT	GRAND AM	1	0	0	1	170	1%	
1987	PONT	GRAND PRIX	1	0	0	1	39	3%	
1987	PONT	SAFARI	1	0	0	1	20	5%	
1987	PORS	911	0	1	0	1	10	10%	
1987	PORS	944	0	3	0	3	26	12%	
1987	SAA	900	1	1	0	2	25	8%	
1987	SUBA	GL	1	2	0	3	47	6%	
1987	TOYT	1/2 TON	1	2	0	3	69	4%	
1987	TOYT	4RUNNER	0	2	0	2	24	8%	
1987	TOYT	CAMRY	13	18	0	31	360	9%	
1987	TOYT	CELICA	4	6	0	10	143	7%	
1987	TOYT	COROLLA	5	7	0	12	263	5%	
1987	TOYT	DELUXE	1	0	0	1	22	5%	
1987	TOYT	MR2	1	0	0	1	13	8%	
1987	TOYT	SR5	0	1	0	1	7	14%	
1987	TOYT	SUPRA	3	0	0	3	42	7%	
1987	TOYT	TERCEL	1	0	0	1	77	1%	
1987	TOYT	VAN WAGON	1	3	0	4	41	10%	
1987	VOLK	CABRIOLET	1	0	0	1	16	6%	
1987	VOLK	GOLF	1	2	0	3	33	9%	
1987	VOLK	JETTA	0	2	0	2	49	4%	
1987	VOLK	VANAGON	0	1	0	1	8	13%	
1987	VOLV	240	4	2	0	6	75	8%	
1987	VOLV	740	4	6	0	10	100	10%	
1987	VOLV	760	1	1	0	2	30	7%	

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1986	ACUR	LEGEND	3	0	0	3	3	58	5%
1986	AMER	CHEROKEE	0	0	2	2	2	192	1%
1986	AUDI	5000	1	0	0	1	1	62	2%
1986	BMW	325I	0	1	24	25	25	100	25%
1986	BMW	528I	1	0	2	3	3	44	7%
1986	BMW	535I	1	0	0	1	1	23	4%
1986	BMW	L7	1	0	0	1	1	3	33%
1986	BUIC	CENTURY	9	0	0	9	9	459	2%
1986	BUIC	ELECTRA	5	0	0	5	5	304	2%
1986	BUIC	LESABRE	8	0	0	8	8	259	3%
1986	BUIC	REGAL	2	0	0	2	2	227	1%
1986	BUIC	SKYHAWK	0	3	20	23	23	102	23%
1986	BUIC	SKYLARK	1	0	0	1	1	64	2%
1986	BUIC	SOMERSET	1	0	0	1	1	86	1%
1986	CADI	DEVILLE	3	0	0	3	3	332	1%
1986	CADI	ELDORADO	1	0	0	1	1	59	2%
1986	CADI	SEVILLE	1	0	0	1	1	38	3%
1986	CHEV	ASTRO VAN	2	0	0	2	2	332	1%
1986	CHEV	BLAZER	3	0	9	12	12	341	4%
1986	CHEV	C10	5	0	0	5	5	521	1%
1986	CHEV	CAMARO	6	0	0	6	6	393	2%
1986	CHEV	CAPRICE	9	0	0	9	9	611	1%
1986	CHEV	CAVALIER	5	0	0	5	5	448	1%
1986	CHEV	CELEBRITY	10	0	0	10	10	785	1%
1986	CHEV	CORVETTE	2	0	0	2	2	138	1%
1986	CHEV	K20	1	0	0	1	1	22	5%
1986	CHEV	MONTE CARLO	4	0	0	4	4	325	1%
1986	CHEV	NOVA	4	0	0	4	4	303	1%
1986	CHEV	S10	3	1	31	35	35	275	13%
1986	CHEV	SUBURBAN	2	0	0	2	2	141	1%
1986	CHRY	FIFTH AVENUE	1	0	0	1	1	174	1%
1986	CHRY	LEBARON	2	0	0	2	2	318	1%
1986	CHRY	NEW YORKER	1	0	0	1	1	78	1%
1986	DODG	B250	2	0	0	2	2	159	1%
1986	FORD	BRONCO	3	0	0	3	3	176	2%
1986	FORD	BRONCO II	1	0	0	1	1	221	0%
1986	FORD	ESCORT	1	0	0	1	1	514	0%
1986	FORD	F150	5	2	10	17	17	1209	1%
1986	FORD	F250	2	0	0	2	2	113	2%
1986	FORD	LTD	4	0	0	4	4	554	1%
1986	FORD	TAURUS	2	0	0	2	2	294	1%
1986	FORD	TEMPO	4	0	0	4	4	332	1%
1986	FORD	THUNDERBIRD	2	0	0	2	2	189	1%
1986	GMC	C1500	3	0	0	3	3	259	1%
1986	GMC	JIMMY	1	0	0	1	1	105	1%
1986	GMC	S15	2	0	10	12	12	120	10%
1986	GMC	SAFARI	0	0	6	6	6	165	4%
1986	GMC	VANDURA	7	0	0	7	7	322	2%
1986	HOND	ACCORD	10	28	118	156	156	630	25%
1986	HOND	CIVIC	3	0	1	4	4	310	1%

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Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Total Rapid Screen %
1986	HOND	PRELUDE	3	0	0	3	112	3%
1986	ISU	CAB	0	0	2	2	2	100%
1986	ISU	IMPULSE	1	0	0	1	6	17%
1986	ISU	PUP	0	0	9	9	51	18%
1986	LINC	MARK VII	2	0	0	2	26	8%
1986	LINC	TOWN CAR	5	0	0	5	387	1%
1986	MAZD	626	2	9	41	52	166	31%
1986	MAZD	B2000	1	0	0	1	428	0%
1986	MERC	GRAND MARQUIS	8	0	0	8	483	2%
1986	MERC	SABLE	3	0	0	3	121	2%
1986	MERZ	300	3	0	0	3	77	4%
1986	MERZ	420	3	0	0	3	47	6%
1986	MERZ	560	3	0	1	4	54	7%
1986	NISS	300ZX	3	0	0	3	114	3%
1986	NISS	720	0	2	12	14	385	4%
1986	NISS	MAXIMA	1	0	0	1	80	1%
1986	NISS	STANZA	1	0	0	1	54	2%
1986	OLDS	98	7	0	0	7	291	2%
1986	OLDS	CALAIS	0	2	13	15	82	18%
1986	OLDS	CUTLASS	14	8	72	94	1551	6%
1986	OLDS	DELTA 88	11	0	0	11	533	2%
1986	OLDS	TORONADO	2	0	0	2	32	6%
1986	OTHER	OTHER	1	0	0	1	11	9%
1986	PLYM	CARAVELLE	0	0	9	9	60	15%
1986	PLYM	HORIZON	1	0	0	1	47	2%
1986	PLYM	RELIANT	1	0	0	1	168	1%
1986	PLYM	VOYAGER	1	0	0	1	166	1%
1986	PONT	6000	6	2	17	25	246	10%
1986	PONT	BONNEVILLE	1	0	0	1	101	1%
1986	PONT	FIERO	1	0	0	1	89	1%
1986	PONT	FIREBIRD	2	0	0	2	212	1%
1986	PONT	GRAND AM	5	0	0	5	148	3%
1986	PONT	GRAND PRIX	2	0	0	2	98	2%
1986	PONT	PARISIENNE	2	0	0	2	182	1%
1986	PORS	911	0	3	2	5	31	16%
1986	PORS	928	0	0	1	1	8	13%
1986	PORS	944	0	2	9	11	64	17%
1986	SAA	900	3	1	7	11	81	14%
1986	SUBA	BRAT	0	0	3	3	5	60%
1986	SUBA	GL	0	0	10	10	58	17%
1986	SUBA	GL-10	0	0	1	1	2	50%
1986	TOYT	1/2 TON	2	0	14	16	201	8%
1986	TOYT	4RUNNER	2	6	20	28	78	36%
1986	TOYT	CAMRY	17	36	111	164	516	32%
1986	TOYT	CELICA	10	14	44	68	225	30%
1986	TOYT	COMM CAMPER	0	0	1	1	1	100%
1986	TOYT	COROLLA	4	1	13	18	466	4%
1986	TOYT	CRESSIDA	1	0	0	1	87	1%
1986	TOYT	DELUXE	0	0	6	6	72	8%
1986	TOYT	SR5	0	2	14	16	46	35%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Rapid Screen		
1986	TOYT	SUPRA	2	0	0	2	77	3%	
1986	TOYT	TERCEL	3	1	11	15	174	9%	
1986	TOYT	VAN WAGON	0	1	25	26	80	33%	
1986	VOLK	CABRIOLET	1	0	0	1	17	6%	
1986	VOLK	GOLF	1	0	7	8	48	17%	
1986	VOLK	GTI	1	0	0	1	12	8%	
1986	VOLK	JETTA	3	0	0	3	88	3%	
1986	VOLV	240	8	0	0	8	208	4%	
1986	VOLV	740	5	0	0	5	182	3%	
1986	VOLV	760	1	0	0	1	32	3%	
1985	BMW	318I	0	1	0	1	12	8%	
1985	BMW	528I	0	2	0	2	10	20%	
1985	BMW	735I	1	0	0	1	10	10%	
1985	BUIC	CENTURY	2	0	0	2	117	2%	
1985	BUIC	ELECTRA	2	0	0	2	85	2%	
1985	BUIC	LESABRE	1	0	0	1	159	1%	
1985	BUIC	REGAL	2	0	0	2	102	2%	
1985	BUIC	RIVIERA	2	0	0	2	97	2%	
1985	BUIC	SKYHAWK	1	1	0	2	41	5%	
1985	CADI	SOMERSET	1	0	0	1	29	3%	
1985	CADI	CIMARRON	2	0	0	2	7	29%	
1985	CADI	ELDORADO	1	0	0	1	79	1%	
1985	CADI	FLEETWOOD	3	0	0	3	93	3%	
1985	CHEV	BLAZER	3	0	0	3	205	1%	
1985	CHEV	CAMARO	3	0	0	3	114	3%	
1985	CHEV	CAPRICE	4	0	0	4	257	2%	
1985	CHEV	CAVALIER	0	2	0	2	148	1%	
1985	CHEV	CELEBRITY	2	3	0	5	212	2%	
1985	CHEV	CORVETTE	1	0	0	1	35	3%	
1985	CHEV	IMPALA	1	0	0	1	34	3%	
1985	CHEV	MONTE CARLO	1	0	0	1	117	1%	
1985	CHEV	NOVA	0	2	0	2	44	5%	
1985	CHRY	FIFTH AVENUE	1	0	0	1	82	1%	
1985	CHRY	LEBARON	1	0	0	1	90	1%	
1985	DODG	600	1	0	0	1	32	3%	
1985	DODG	B250	1	0	0	1	71	1%	
1985	DODG	CARAVAN	0	2	0	2	58	3%	
1985	DODG	D-100	1	0	0	1	201	0%	
1985	FORD	BRONCO	1	0	0	1	41	2%	
1985	FORD	BRONCO II	1	0	0	1	78	1%	
1985	FORD	F150	2	0	0	2	334	1%	
1985	FORD	LTD	5	0	0	5	355	1%	
1985	FORD	TEMPO	1	0	0	1	108	1%	
1985	FORD	THUNDERBIRD	1	0	0	1	67	1%	
1985	HOND	ACCORD	2	0	0	2	167	1%	
1985	HOND	CIVIC	1	1	0	2	61	3%	
1985	LINC	TOWN CAR	3	0	0	3	199	2%	
1985	MERC	GRAND MARQUIS	2	0	0	2	332	1%	
1985	MERC	TOPAZ	2	0	0	2	11	18%	
1985	MERZ	500	2	0	0	2	13	15%	

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total	Vehicles	Rapid
						Total Rapid Screen	Tested	Screen %
1985	NISS	300ZX		1	0	0	1	47 2%
1985	OLDS	98		5	0	0	5	132 4%
1985	OLDS	CUTLASS		7	1	0	8	429 2%
1985	OLDS	DELTA 88		2	0	0	2	228 1%
1985	PLYM	RELIANT		1	0	0	1	65 2%
1985	PLYM	VOYAGER		2	1	0	3	45 7%
1985	PONT	6000		2	0	0	2	67 3%
1985	PONT	FIREBIRD		2	0	0	2	52 4%
1985	PONT	GRAND PRIX		3	0	0	3	47 6%
1985	PONT	PARISIENNE		2	0	0	2	69 3%
1985	SAA	900		1	0	0	1	19 5%
1985	TOYT	1/2 TON		0	2	0	2	67 3%
1985	TOYT	4RUNNER		1	0	0	1	11 9%
1985	TOYT	CAMRY		4	6	0	10	126 8%
1985	TOYT	CELICA		1	1	0	2	66 3%
1985	TOYT	COROLLA		1	3	0	4	132 3%
1985	TOYT	DELUXE		0	2	0	2	30 7%
1985	TOYT	SR5		0	1	0	1	34 3%
1985	TOYT	TERCEL		1	1	0	2	77 3%
1985	TOYT	VAN WAGON		0	2	0	2	19 11%
1985	VOLK	JETTA		1	1	0	2	25 8%
1985	VOLK	VANAGON		0	1	0	1	14 7%
1985	VOLV	240		1	0	0	1	82 1%
1985	VOLV	740		2	0	0	2	44 5%
1984	AMER	CHEROKEE		0	1	1	2	51 4%
1984	BMW	533I		1	0	0	1	7 14%
1984	BMW	633 CSI		1	0	0	1	8 13%
1984	BUIC	CENTURY		1	0	0	1	140 1%
1984	BUIC	LESABRE		2	0	0	2	353 1%
1984	BUIC	REGAL		1	0	0	1	232 0%
1984	BUIC	RIVIERA		3	0	0	3	147 2%
1984	BUIC	SKYLARK		2	0	0	2	106 2%
1984	CHEV	BLAZER		1	0	0	1	212 0%
1984	CHEV	C10		5	0	0	5	333 2%
1984	CHEV	CAMARO		3	0	0	3	223 1%
1984	CHEV	CAPRICE		4	0	0	4	481 1%
1984	CHEV	CAVALIER		2	0	0	2	275 1%
1984	CHEV	CELEBRITY		3	0	0	3	300 1%
1984	CHEV	G20		1	0	6	7	172 4%
1984	CHEV	MONTE CARLO		1	0	0	1	209 0%
1984	CHEV	S10		1	0	0	1	198 1%
1984	CHEV	SUBURBAN		1	0	0	1	67 1%
1984	CHRY	FIFTH AVENUE		1	0	0	1	134 1%
1984	DATS	300 ZX		1	0	0	1	56 2%
1984	DATS	720		1	0	9	10	77 13%
1984	DATS	MAXIMA		1	0	0	1	41 2%
1984	DODG	ARIES		1	0	0	1	83 1%
1984	DODG	CARAVAN		0	1	7	8	44 18%
1984	DODG	D-150		2	0	0	2	302 1%
1984	DODG	SHADOW		1	0	0	1	1 100%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Total Rapid Screen %
1984	FORD	F150	2	0	0	2	598	0%
1984	FORD	LTD	4	0	0	4	468	1%
1984	FORD	MUSTANG	1	0	0	1	142	1%
1984	FORD	RANGER	1	0	0	1	227	0%
1984	FORD	THUNDERBIRD	2	0	0	2	109	2%
1984	GMC	C1500	2	0	0	2	177	1%
1984	GMC	G2500	2	0	0	2	16	13%
1984	GMC	K1500	1	0	0	1	66	2%
1984	GMC	VANDURA	2	0	0	2	271	1%
1984	HOND	ACCORD	1	0	0	1	168	1%
1984	HOND	CIVIC	0	1	4	5	80	6%
1984	LINC	CONTINENTAL	1	0	0	1	38	3%
1984	MERC	GRAND MARQUIS	6	0	0	6	524	1%
1984	MERZ	300	1	0	0	1	2	50%
1984	MERZ	500	1	0	0	1	20	5%
1984	NISS	720	0	0	1	1	1	100%
1984	OLDS	98	1	0	0	1	132	1%
1984	OLDS	CUTLASS	5	0	0	5	783	1%
1984	OLDS	DELTA 88	6	0	0	6	609	1%
1984	OLDS	TORONADO	2	0	0	2	104	2%
1984	PLYM	VOYAGER	0	0	3	3	35	9%
1984	PONT	FIREBIRD	1	0	0	1	99	1%
1984	PONT	GRAND PRIX	2	0	0	2	75	3%
1984	PONT	PARISIENNE	1	0	0	1	105	1%
1984	SAA	900	1	3	1	5	18	28%
1984	SUBA	GL	1	0	4	5	27	19%
1984	TOYT	1/2 TON	1	0	0	1	61	2%
1984	TOYT	CAMRY	2	3	22	27	107	25%
1984	TOYT	CELICA	0	0	5	5	66	8%
1984	TOYT	COMM CAMPER	0	0	1	1	1	100%
1984	TOYT	COROLLA	1	1	8	10	180	6%
1984	TOYT	SUPRA	2	0	0	2	32	6%
1984	TOYT	VAN WAGON	2	0	0	2	26	8%
1984	VOLK	CABRIOLET	0	0	2	2	2	100%
1984	VOLK	JETTA	1	0	0	1	11	9%
1984	VOLK	RABBIT	1	0	1	2	45	4%
1984	VOLK	SCIROCCO	1	0	1	2	10	20%
1984	VOLV	240	3	0	0	3	177	2%
1983	BUIC	ELECTRA	2	0	0	2	49	4%
1983	BUIC	REGAL	1	0	0	1	79	1%
1983	CADI	FLEETWOOD	1	0	0	1	21	5%
1983	CHEV	C20	1	0	0	1	15	7%
1983	CHEV	CAPRICE	2	0	0	2	110	2%
1983	CHRY	LEBARON	1	0	0	1	19	5%
1983	DATS	720	0	1	0	1	8	13%
1983	FORD	BRONCO	1	0	0	1	31	3%
1983	FORD	F150	2	0	0	2	191	1%
1983	GMC	S15	1	0	0	1	23	4%
1983	JAGU	XJ6	1	0	0	1	4	25%
1983	LEXS	ES 300	1	0	0	1	1	100%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen		Total Vehicles Tested	Rapid Screen %
						Total	Screen		
1983	LINC	TOWN CAR	1	0	0	1		33	3%
1983	MERC	CAPRI	1	0	0	1		3	33%
1983	MERC	GRAND MARQUIS	1	0	0	1		104	1%
1983	OLDS	98	1	0	0	1		73	1%
1983	OLDS	CUTLASS	1	0	0	1		203	0%
1983	OLDS	DELTA 88	1	0	0	1		128	1%
1983	OLDS	TORONADO	1	0	0	1		29	3%
1983	TOYT	CELICA	2	0	0	2		22	9%
1983	TOYT	COROLLA	1	0	0	1		35	3%
1983	VOLV	240	1	0	0	1		45	2%
1982	BUIC	ELECTRA	1	0	0	1		70	1%
1982	CHEV	C10	1	0	0	1		192	1%
1982	CHEV	CAPRICE	2	0	0	2		94	2%
1982	CHEV	G20	1	0	0	1		64	2%
1982	CHEV	S10	1	0	0	1		114	1%
1982	CHRY	CORDOBA	1	0	0	1		15	7%
1982	DATS	200 SX	1	0	0	1		18	6%
1982	DATS	280 Z	2	0	0	2		39	5%
1982	DATS	720	0	0	6	6		27	22%
1982	DATS	MAXIMA	1	0	0	1		6	17%
1982	FORD	F100	2	0	0	2		100	2%
1982	MERZ	380	2	0	0	2		33	6%
1982	OLDS	98	1	0	0	1		105	1%
1982	OLDS	DELTA 88	1	0	0	1		165	1%
1982	TOYT	1/2 TON	0	0	10	10		52	19%
1982	TOYT	CRESSIDA	1	0	0	1		18	6%
1982	VOLK	CAMPER	0	0	1	1		1	100%
1982	VOLV	240	1	0	0	1		86	1%
1981	CHEV	CITATION	1	0	0	1		25	4%
1981	CHEV	CORVETTE	1	0	0	1		41	2%
1981	FORD	F150	1	0	0	1		122	1%
1981	GMC	C1500	1	0	0	1		32	3%
1981	OLDS	CUTLASS	1	0	0	1		103	1%
1981	TOYT	CRESSIDA	0	1	0	1		3	33%
1981	VOLV	240	1	0	0	1		22	5%
1980	CADI	DEVILLE	1	0	0	1		64	2%
1980	CHEV	C10	1	0	0	1		122	1%
1980	CHEV	CAPRICE	1	0	0	1		62	2%
1980	CHEV	CITATION	1	0	0	1		49	2%
1980	CHEV	CORVETTE	1	0	0	1		111	1%
1980	CHEV	MALIBU	2	0	0	2		123	2%
1980	MERZ	350	1	0	0	1		1	100%
1980	OLDS	CUTLASS	1	0	0	1		238	0%
1979	BUIC	ELECTRA	1	0	0	1		14	7%
1979	BUIC	LESABRE	1	0	0	1		40	3%
1979	FORD	F100	1	0	0	1		65	2%
1979	OLDS	88	1	0	0	1		22	5%
1979	OLDS	CUTLASS	1	0	0	1		85	1%
1979	PONT	BONNEVILLE	1	0	0	1		41	2%
1979	PONT	FIREBIRD	1	0	0	1		40	3%

Appendix A3
Vehicles RapidScreened

Year	Make	Model	RSD	Hybrid	LEI	Total Rapid Screen	Total Vehicles Tested	Rapid Screen %
1978	BUIC	LESABRE	1	0	0	1	78	1%
1978	CADI	SEVILLE	1	0	0	1	33	3%
1978	CHRY	LEBARON	1	0	0	1	25	4%
1978	DODG	C500	1	0	0	1	4	25%
1978	MERZ	450	1	0	0	1	26	4%
1978	OLDS	88	1	0	0	1	43	2%
1976	BUIC	LESABRE	1	0	0	1	22	5%
1976	CHEV	BLAZER	1	0	0	1	14	7%
1976	CHEV	CAPRICE	1	0	0	1	39	3%
1976	MERZ	230	1	0	0	1	2	50%
1971	OLDS	TORONADO	1	0	0	1	2	50%

Appendix B – Emission Reductions

- **B1 – IM240 Tests**
 - **Station Based Tests**
 - **RapidScreen Audit Vehicles**
- **B2 – Enhanced Idle Tests**
 - **Station Based Tests**
 - **RapidScreen Audit Vehicles**
- **B3 – Basic Idle Tests**
 - **Station Based Tests**
 - **RapidScreen Audit Vehicles**
- **B4 – Summary**

Appendix B Notes and Assumptions

Unresolved remaining in the area – Vehicles that do not complete an inspection cycle by passing the inspection or obtaining a waiver are termed “unresolved”. In Arizona and Colorado studies, some of these vehicles have been found continuing to operate in the I/M program area. In this report it has been assumed that one third of these vehicles continue to operate in the I/M area and two thirds are either scrapped or transfer out of the area.

Model Year/Type – Vehicles are grouped by model year and type. Type “P” are light duty passenger vehicles (LDGV) and type “T” are light duty trucks (LDGT). On pages showing results for Enhanced and Basic Idle tests, results for model year 1980 and older vehicles are included in the first section of the table along with the results for the 1981 model vehicles.

First Result – Last Result – The results of the first I/M test of the vehicle performed between April 2000 and February 2001 and the last I/M test of the vehicle performed between April 2000 and March 2001. The purpose of the earlier cutoff date for initial tests vs. retests is to limit the number of open repair and retest cycles.

Initial/Final HC/CO/NOx – Average tailpipe test emissions values. Tailpipe test results are in grams per mile for IM240 tests and in ppm HC and percent CO for idle tests.

The pass/fail/waiver result is the result for the whole I/M result including the gas cap pressure test. In instances where a vehicle initially fails the gas cap pressure test but is not a high tailpipe emitter, the tailpipe emissions recorded on the final test can be higher than the tailpipe emissions recorded on the initial test. Minor variations in test results on the same vehicle are normal and not significant provided the variation is small compared to the test standard.

Appendix B1 IM240 Test Emissions Reductions

Unresolved fails remaining in area							0.33			Reduction %				
Model	First Result	Last Result	Vehicles		Initial HC	CO	NOX	Final HC	CO	NOX	HC	CO	NOX	
1981	Pass	-	386		0.79	12.15	2.11	0.79	12.15	2.11	-	-	-	
	P	Fail	Pass	95	15.4%	3.05	57.64	2.42	0.90	13.44	2.08	70.5%	76.7%	13.8%
		Fail	Unresolv.	73	11.9%	6.39	104.62	2.58	1.91	34.20	0.83	70.1%	67.3%	68.0%
		Fail	Waiver	61	9.9%	6.50	107.60	2.01	5.57	98.10	1.99	14.2%	8.8%	1.3%
Total	Fail%		615	37.2%	2.37	39.62	2.20	1.42	23.49	1.94	40.3%	40.7%	11.9%	
1982	Pass	-	1,642		0.83	11.48	2.36	0.83	11.48	2.36	-	-	-	
	P	Fail	Pass	297	13.0%	3.06	51.25	2.74	0.95	13.43	2.33	68.9%	73.8%	14.7%
		Fail	Unresolv.	139	6.1%	6.23	97.37	2.37	2.05	32.03	0.78	67.1%	67.1%	67.0%
		Fail	Waiver	210	9.2%	5.04	86.56	2.62	4.42	77.81	2.64	12.3%	10.1%	-0.6%
Total	Fail%		2,288	28.2%	1.83	28.75	2.43	1.25	19.07	2.29	31.9%	33.7%	6.0%	
1983	Pass	-	1,010		0.84	10.01	2.42	0.84	10.01	2.42	-	-	-	
	P	Fail	Pass	159	11.4%	2.74	45.61	2.22	0.79	9.52	2.01	71.2%	79.1%	9.4%
		Fail	Unresolv.	127	9.1%	5.35	97.69	2.13	1.73	32.56	0.68	67.7%	66.7%	68.4%
		Fail	Waiver	101	7.2%	5.40	91.42	2.34	4.81	82.67	2.13	10.9%	9.6%	8.8%
Total	Fail%		1,397	27.7%	1.79	27.92	2.37	1.20	17.26	2.20	33.1%	38.2%	7.2%	
1984	Pass	-	5,999		0.80	9.11	2.36	0.80	9.11	2.36	-	-	-	
	P	Fail	Pass	867	11.2%	2.71	46.44	2.57	0.89	10.26	2.32	67.2%	77.9%	9.8%
		Fail	Unresolv.	394	5.1%	5.40	84.81	2.54	1.77	28.21	0.83	67.3%	66.7%	67.4%
		Fail	Waiver	501	6.5%	4.67	86.17	2.29	4.23	82.74	2.22	9.5%	4.0%	3.2%
Total	Fail%		7,761	22.7%	1.49	22.09	2.38	1.08	14.96	2.26	27.9%	32.3%	5.0%	
1985	Pass	-	2,911		0.86	9.04	2.25	0.86	9.04	2.25	-	-	-	
	P	Fail	Pass	418	11.0%	3.05	49.89	2.39	0.99	11.16	2.32	67.4%	77.6%	2.6%
		Fail	Unresolv.	268	7.0%	5.78	82.05	2.50	1.87	26.91	0.82	67.6%	67.2%	67.2%
		Fail	Waiver	207	5.4%	6.15	84.66	2.37	5.19	79.12	2.20	15.7%	6.5%	7.1%
Total	Fail%		3,804	23.5%	1.73	22.78	2.29	1.18	14.34	2.16	31.9%	37.1%	5.9%	
1986	Pass	-	12,358		0.76	7.36	2.09	0.76	7.36	2.09	-	-	-	
	P	Fail	Pass	1,144	7.8%	3.31	47.13	2.36	0.89	9.73	2.08	73.1%	79.3%	11.8%
		Fail	Unresolv.	460	3.2%	5.87	70.65	2.59	1.94	22.85	0.85	67.0%	67.6%	67.1%
		Fail	Waiver	621	4.3%	5.05	73.69	2.67	4.57	68.81	2.51	9.5%	6.6%	5.8%
Total	Fail%		14,583	15.3%	1.31	15.30	2.15	0.97	10.65	2.07	25.6%	30.4%	3.9%	
1987	Pass	-	5,170		0.72	6.80	2.11	0.72	6.80	2.11	-	-	-	
	P	Fail	Pass	472	7.8%	3.11	44.70	2.26	0.84	8.42	2.05	73.2%	81.2%	9.2%
		Fail	Unresolv.	232	3.8%	6.04	70.16	2.69	2.00	23.40	0.88	66.9%	66.7%	67.1%
		Fail	Waiver	174	2.9%	4.99	66.51	2.79	4.30	59.65	2.77	13.9%	10.3%	0.6%
Total	Fail%		6,048	14.5%	1.24	13.90	2.17	0.88	9.08	2.08	28.6%	34.7%	4.0%	
1988	Pass	-	20,193		0.67	6.08	1.90	0.67	6.08	1.90	-	-	-	
	P	Fail	Pass	1,221	5.5%	3.10	41.75	2.20	0.80	7.19	2.06	74.1%	82.8%	6.5%
		Fail	Unresolv.	324	1.5%	6.22	67.79	2.52	2.08	22.55	0.84	66.5%	66.7%	66.7%
		Fail	Waiver	338	1.5%	5.48	70.39	2.51	5.06	68.85	2.47	7.6%	2.2%	1.7%
Total	Fail%		22,076	8.5%	0.96	9.94	1.93	0.77	7.34	1.90	20.2%	26.1%	1.7%	
1989	Pass	-	8,626		0.68	6.25	1.86	0.68	6.25	1.86	-	-	-	
	P	Fail	Pass	465	5.0%	3.10	44.03	1.94	0.79	7.26	1.94	74.5%	83.5%	-0.1%
		Fail	Unresolv.	147	1.6%	6.23	61.88	2.71	2.05	21.02	0.84	67.1%	66.0%	69.0%
		Fail	Waiver	101	1.1%	6.94	72.38	2.69	5.89	61.99	2.53	15.2%	14.4%	5.9%
Total	Fail%		9,339	7.6%	0.95	9.72	1.89	0.76	7.13	1.85	20.2%	26.6%	1.6%	
1990	Pass	-	24,727		0.62	6.04	1.90	0.62	6.04	1.90	-	-	-	
	P	Fail	Pass	1,141	4.3%	2.72	39.72	2.13	0.77	7.60	2.10	71.6%	80.9%	1.3%
		Fail	Unresolv.	211	0.8%	5.65	75.04	2.34	1.84	23.81	0.82	67.5%	68.3%	65.1%
		Fail	Waiver	215	0.8%	5.55	73.79	2.77	4.43	65.69	2.71	20.2%	11.0%	2.2%
Total	Fail%		26,294	6.0%	0.79	8.61	1.92	0.67	6.74	1.91	15.7%	21.7%	0.7%	
1991	Pass	-	9,383		0.42	5.10	1.44	0.42	5.10	1.44	-	-	-	
	P	Fail	Pass	697	6.6%	1.95	29.61	2.37	0.51	6.36	1.56	74.0%	78.5%	34.1%
		Fail	Unresolv.	239	2.3%	3.11	37.29	2.96	1.09	11.94	0.98	64.9%	68.0%	66.7%
		Fail	Waiver	269	2.5%	3.35	35.07	3.06	2.96	32.08	3.07	11.5%	8.5%	-0.5%
Total	Fail%		10,588	11.4%	0.66	8.20	1.57	0.51	6.02	1.48	22.8%	26.6%	6.2%	
1992	Pass	-	27,149		0.40	5.03	1.38	0.40	5.03	1.38	-	-	-	
	P	Fail	Pass	1,495	5.1%	1.98	35.69	1.90	0.47	5.72	1.52	76.1%	84.0%	20.2%
		Fail	Unresolv.	334	1.1%	3.00	38.91	2.56	0.97	13.52	0.84	67.6%	65.3%	67.4%
		Fail	Waiver	475	1.6%	3.44	35.68	2.91	3.01	30.31	2.94	12.8%	15.0%	-1.0%

Appendix B1 IM240 Test Emissions Reductions

Unresolved fails remaining in area				0.33			Final			Reduction %			
Model Year/Type	First Result	Last Result	Vehicles	HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX	
Total	Fail%		29,453	7.8%	0.56	7.47	1.45	0.46	5.57	1.41	19.0%	25.4%	2.7%
1993 P	Pass	-	11,116		0.38	4.66	1.26	0.38	4.66	1.26	-	-	-
	Fail	Pass	505	4.3%	1.95	32.03	1.85	0.47	5.98	1.39	75.7%	81.3%	25.0%
	Fail	Unresolv.	107	0.9%	3.32	45.85	2.55	1.08	14.33	0.85	67.4%	68.7%	66.7%
	Fail	Waiver	120	1.0%	3.00	31.09	2.80	2.91	33.54	2.88	3.0%	-7.9%	-2.9%
Total	Fail%		11,848	6.2%	0.50	6.46	1.31	0.42	5.09	1.28	16.8%	21.2%	2.6%
1994 P	Pass	-	27,424		0.30	3.53	0.99	0.30	3.53	0.99	-	-	-
	Fail	Pass	770	2.7%	1.79	22.12	1.52	0.42	4.83	1.20	76.6%	78.2%	21.0%
	Fail	Unresolv.	100	0.4%	3.58	26.58	2.42	1.13	8.44	0.79	68.6%	68.2%	67.5%
	Fail	Waiver	144	0.5%	2.97	25.04	2.92	2.81	21.42	2.91	5.4%	14.5%	0.1%
Total	Fail%		28,438	3.6%	0.37	4.22	1.01	0.32	3.67	1.00	12.7%	13.0%	1.4%
1995 P	Pass	-	13,598		0.24	2.78	0.78	0.24	2.78	0.78	-	-	-
	Fail	Pass	262	1.9%	1.60	21.04	1.31	0.36	3.98	0.94	77.8%	81.1%	28.4%
	Fail	Unresolv.	29	0.2%	4.81	28.97	1.97	1.43	9.14	0.62	70.3%	68.4%	68.3%
	Fail	Waiver	29	0.2%	3.51	39.72	2.16	3.36	38.42	2.18	4.3%	3.3%	-0.8%
Total	Fail%		13,918	2.3%	0.28	3.26	0.79	0.25	2.89	0.78	11.0%	11.2%	1.2%
1996 P	Pass	-	25,821		0.16	2.01	0.60	0.16	2.01	0.60	-	-	-
	Fail	Pass	463	1.8%	0.62	11.73	0.89	0.19	2.67	0.75	69.6%	77.2%	15.0%
	Fail	Unresolv.	28	0.1%	2.42	31.55	1.66	0.87	10.84	0.54	64.1%	65.6%	67.5%
	Fail	Waiver	15	0.1%	1.72	20.59	2.20	2.09	23.19	2.50	-21.5%	-12.6%	-13.8%
Total	Fail%		26,327	1.9%	0.17	2.23	0.60	0.16	2.05	0.60	5.4%	8.1%	0.6%
1997 P	Pass	-	15,612		0.13	1.65	0.50	0.13	1.65	0.50	-	-	-
	Fail	Pass	135	0.9%	0.69	14.09	0.66	0.16	2.33	0.53	77.4%	83.5%	19.5%
	Fail	Unresolv.	7	0.0%	1.41	31.63	0.91	0.49	10.20	0.33	65.5%	67.8%	63.4%
	Fail	Waiver	3	0.0%	2.09	7.56	0.96	2.77	8.93	1.26	-32.0%	-18.2%	-30.9%
Total	Fail%		15,757	0.9%	0.14	1.77	0.50	0.13	1.66	0.50	3.5%	6.2%	0.3%
1998 P	Pass	-	27,323		0.09	1.40	0.37	0.09	1.40	0.37	-	-	-
	Fail	Pass	192	0.7%	0.41	8.63	0.63	0.09	1.77	0.53	78.3%	79.5%	15.8%
	Fail	Unresolv.	4	0.0%	1.07	10.63	2.60	0.35	3.51	0.86	67.0%	67.0%	67.0%
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		27,519	0.7%	0.09	1.45	0.37	0.09	1.41	0.37	2.5%	3.4%	0.3%
1999 P	Pass	-	15,054		0.07	1.09	0.29	0.07	1.09	0.29	-	-	-
	Fail	Pass	98	0.6%	0.59	10.10	0.34	0.06	1.05	0.30	90.0%	89.6%	12.6%
	Fail	Unresolv.	3	0.0%	2.10	51.45	0.37	0.69	16.98	0.12	67.0%	67.0%	67.0%
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		15,155	0.7%	0.07	1.15	0.29	0.07	1.09	0.29	5.3%	5.7%	0.1%
2000 P	Pass	-	6,686		0.05	0.69	0.22	0.05	0.69	0.22	-	-	-
	Fail	Pass	15	0.2%	0.42	12.05	0.51	0.10	1.26	0.29	77.6%	89.5%	42.5%
	Fail	Unresolv.	1	0.0%	0.19	4.71	2.17	0.06	1.56	0.72	67.0%	67.0%	67.0%
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		6,702	0.2%	0.05	0.72	0.22	0.05	0.69	0.22	1.4%	3.4%	0.3%
2001 P	Pass	-	150		0.03	0.48	0.16	0.03	0.48	0.16	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		150	-	0.03	0.48	0.16	0.03	0.48	0.16	-	-	-
Total Passenger Vehicles													
All	Pass	-	262,338		0.37	4.10	1.17	0.37	4.10	1.17	-	-	-
P	Fail	Pass	10,911	3.9%	2.43	37.00	2.02	0.66	7.25	1.75	72.9%	80.4%	13.0%
	Fail	Unresolv.	3,227	1.2%	5.14	67.02	2.54	1.69	22.07	0.83	67.2%	67.1%	67.1%
	Fail	Waiver	3,584	1.3%	4.69	65.34	2.64	4.16	60.52	2.59	11.4%	7.4%	2.1%
Total	Fail%		280,060	6.3%	0.56	6.89	1.24	0.45	5.15	1.21	20.5%	25.2%	2.5%
1981 T	Pass	-	147		2.14	32.68	3.44	2.14	32.68	3.44	-	-	-
	Fail	Pass	33	16.8%	5.76	52.99	3.77	2.27	35.36	3.71	60.5%	33.3%	1.5%
	Fail	Unresolv.	11	5.6%	11.20	160.47	4.49	3.96	51.77	1.62	64.7%	67.7%	63.8%
	Fail	Waiver	6	3.0%	10.70	142.81	4.59	12.19	140.50	4.60	-13.9%	1.6%	-0.1%
Total	Fail%		197	25.4%	3.51	46.57	3.59	2.57	37.48	3.42	26.8%	19.5%	4.7%
1982	Pass	-	748		2.18	30.42	3.12	2.18	30.42	3.12	-	-	-

Appendix B1 IM240 Test Emissions Reductions

Unresolved fails remaining in area

Model Year/Type	First Result	Last Result	Vehicles	0.33			HC	Initial CO	NOX	Reduction %			
				HC	CO	NOX				HC	CO	NOX	
T	Fail	Pass	162	16.3%	5.18	59.41	3.34	2.25	37.10	2.77	56.6%	37.6%	17.2%
	Fail	Unresolv.	44	4.4%	10.09	86.61	4.24	3.20	27.78	1.39	68.3%	67.9%	67.1%
	Fail	Waiver	39	3.9%	10.03	126.75	2.57	8.98	124.01	2.22	10.5%	2.2%	13.6%
Total	Fail%		993	24.7%	3.33	41.42	3.18	2.50	35.07	2.95	24.8%	15.3%	7.3%
1983	Pass	-	369		2.31	31.38	3.09	2.31	31.38	3.09	-	-	-
T	Fail	Pass	92	18.4%	5.46	58.25	3.26	2.95	39.00	2.99	45.9%	33.1%	8.1%
	Fail	Unresolv.	22	4.4%	7.42	108.54	3.65	2.41	35.51	1.15	67.5%	67.3%	68.6%
	Fail	Waiver	17	3.4%	8.83	142.20	2.74	9.08	144.02	1.89	-2.8%	-1.3%	31.1%
Total	Fail%		500	26.2%	3.34	43.49	3.13	2.66	36.80	2.94	20.2%	15.4%	6.0%
1984	Pass	-	1,985		1.32	20.08	2.68	1.32	20.08	2.68	-	-	-
T	Fail	Pass	453	16.0%	3.91	54.40	3.32	1.66	24.94	3.07	57.4%	54.1%	7.5%
	Fail	Unresolv.	165	5.8%	7.73	100.08	2.86	2.58	33.02	0.98	66.6%	67.0%	65.8%
	Fail	Waiver	233	8.2%	7.03	105.64	2.62	6.21	94.90	2.64	11.7%	10.2%	-0.8%
Total	Fail%		2,836	30.0%	2.58	37.24	2.79	1.85	27.75	2.64	28.2%	25.5%	5.3%
1985	Pass	-	893		1.27	18.04	2.73	1.27	18.04	2.73	-	-	-
T	Fail	Pass	200	15.8%	4.47	50.41	3.31	1.82	27.03	3.06	59.2%	46.4%	7.6%
	Fail	Unresolv.	70	5.5%	6.23	93.99	3.07	2.10	29.71	1.02	66.3%	68.4%	66.7%
	Fail	Waiver	106	8.4%	7.67	104.67	3.13	6.49	88.69	3.05	15.4%	15.3%	2.7%
Total	Fail%		1,269	29.6%	2.58	34.57	2.87	1.84	26.00	2.71	28.8%	24.8%	5.6%
1986	Pass	-	4,738		1.23	15.55	2.63	1.23	15.55	2.63	-	-	-
T	Fail	Pass	685	11.6%	3.75	45.17	3.14	1.53	23.06	2.87	59.1%	48.9%	8.5%
	Fail	Unresolv.	197	3.3%	7.28	80.19	3.17	2.39	25.90	1.05	67.1%	67.7%	66.8%
	Fail	Waiver	287	4.9%	6.37	90.10	2.71	5.75	84.53	2.66	9.7%	6.2%	1.8%
Total	Fail%		5,907	19.8%	1.97	24.76	2.71	1.52	20.12	2.61	22.8%	18.8%	3.8%
1987	Pass	-	1,933		1.20	12.77	2.67	1.20	12.77	2.67	-	-	-
T	Fail	Pass	156	7.0%	3.58	45.61	2.92	1.42	17.24	2.66	60.2%	62.2%	8.8%
	Fail	Unresolv.	55	2.5%	7.70	77.53	2.83	2.54	25.16	0.93	67.1%	67.5%	67.1%
	Fail	Waiver	72	3.2%	6.67	93.50	3.15	6.22	85.88	3.15	6.7%	8.1%	-0.1%
Total	Fail%		2,216	12.8%	1.70	19.32	2.71	1.41	15.77	2.64	17.3%	18.4%	2.4%
1988	Pass	-	7,825		1.03	9.92	2.58	1.03	9.92	2.58	-	-	-
T	Fail	Pass	626	7.1%	3.75	36.06	3.67	1.31	12.57	2.63	65.0%	65.1%	28.3%
	Fail	Unresolv.	149	1.7%	6.54	53.97	4.37	2.16	18.59	1.40	66.9%	65.5%	67.9%
	Fail	Waiver	231	2.6%	7.22	76.65	3.76	5.88	70.47	3.34	18.6%	8.1%	11.1%
Total	Fail%		8,831	11.4%	1.47	14.26	2.72	1.19	11.84	2.59	19.1%	17.0%	4.9%
1989	Pass	-	2,823		1.06	10.74	2.51	1.06	10.74	2.51	-	-	-
T	Fail	Pass	217	6.9%	4.13	49.91	3.34	1.31	15.00	2.63	68.2%	70.0%	21.4%
	Fail	Unresolv.	57	1.8%	7.13	81.05	3.62	2.52	28.57	1.22	64.6%	64.7%	66.4%
	Fail	Waiver	53	1.7%	7.55	68.66	3.53	7.29	59.99	3.27	3.4%	12.6%	7.5%
Total	Fail%		3,150	10.4%	1.49	15.69	2.60	1.21	12.18	2.51	18.9%	22.3%	3.7%
1990	Pass	-	9,418		0.94	9.22	2.48	0.94	9.22	2.48	-	-	-
T	Fail	Pass	546	5.4%	3.22	41.12	3.18	1.15	11.54	2.55	64.2%	71.9%	19.7%
	Fail	Unresolv.	93	0.9%	6.63	73.84	3.46	2.08	24.00	1.13	68.6%	67.5%	67.2%
	Fail	Waiver	111	1.1%	7.30	79.92	3.59	6.28	78.72	3.31	14.0%	1.5%	7.9%
Total	Fail%		10,168	7.4%	1.19	12.30	2.54	1.02	10.24	2.48	13.8%	16.7%	2.3%
1991	Pass	-	3,500		0.86	9.09	2.05	0.86	9.09	2.05	-	-	-
T	Fail	Pass	178	4.7%	3.51	43.85	2.59	1.06	9.40	2.21	69.7%	78.6%	14.7%
	Fail	Unresolv.	35	0.9%	5.18	56.50	3.01	1.79	19.56	0.99	65.5%	65.4%	67.0%
	Fail	Waiver	39	1.0%	5.68	66.51	3.24	4.68	56.20	3.16	17.7%	15.5%	2.5%
Total	Fail%		3,752	6.7%	1.08	11.78	2.09	0.92	9.70	2.06	14.7%	17.7%	1.8%
1992	Pass	-	12,018		0.80	8.21	2.27	0.80	8.21	2.27	-	-	-
T	Fail	Pass	535	4.2%	2.73	32.65	2.81	1.00	9.74	2.32	63.4%	70.2%	17.4%
	Fail	Unresolv.	90	0.7%	4.54	46.24	3.25	1.45	14.36	1.07	68.0%	68.9%	67.0%
	Fail	Waiver	124	1.0%	6.25	52.47	3.05	5.90	48.68	3.09	5.6%	7.2%	-1.3%
Total	Fail%		12,767	5.9%	0.96	9.93	2.30	0.86	8.71	2.27	10.2%	12.3%	1.5%
1993	Pass	-	4,786		0.75	7.51	2.11	0.75	7.51	2.11	-	-	-
T	Fail	Pass	170	3.4%	2.93	38.25	2.23	0.90	9.16	2.02	69.2%	76.1%	9.5%
	Fail	Unresolv.	18	0.4%	3.32	45.16	3.60	0.93	14.36	1.30	71.9%	68.2%	63.9%
	Fail	Waiver	20	0.4%	5.17	60.53	3.21	5.00	63.61	2.84	3.3%	-5.1%	11.5%
Total	Fail%		4,994	4.2%	0.85	8.90	2.12	0.77	7.81	2.10	9.2%	12.2%	0.8%

Appendix B1 IM240 Test Emissions Reductions

Unresolved fails remaining in area

Model Year/Type	First Result	Last Result	Vehicles	0.33			Final			Reduction %			
				HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX	
1994	Pass	-	14,245	0.61	6.35	1.80	0.61	6.35	1.80	-	-	-	
	T Fail	Pass	352	2.4%	1.89	17.99	2.73	0.79	8.24	2.11	58.1%	54.2%	22.8%
	T Fail	Unresolv.	39	0.3%	3.56	42.32	4.68	1.17	13.97	1.55	67.2%	67.0%	66.9%
	T Fail	Waiver	54	0.4%	4.04	31.71	4.51	4.37	35.14	4.91	-8.2%	-10.8%	-8.9%
Total	Fail%		14,690	3.0%	0.66	6.82	1.84	0.63	6.52	1.82	4.8%	4.3%	1.2%
1995	Pass	-	6,389	0.54	6.32	1.64	0.54	6.32	1.64	-	-	-	
	T Fail	Pass	138	2.1%	1.80	18.32	2.09	0.75	8.42	1.79	58.1%	54.0%	14.2%
	T Fail	Unresolv.	11	0.2%	6.03	64.45	2.14	2.05	22.17	0.66	66.0%	65.6%	69.2%
	T Fail	Waiver	12	0.2%	4.71	43.08	3.10	4.62	58.93	2.90	1.9%	-36.8%	6.4%
Total	Fail%		6,550	2.5%	0.59	6.74	1.65	0.56	6.49	1.64	4.9%	3.7%	0.6%
1996	Pass	-	13,281	0.22	2.99	0.94	0.22	2.99	0.94	-	-	-	
	T Fail	Pass	194	1.4%	0.77	11.80	1.75	0.25	3.72	1.18	67.9%	68.5%	32.5%
	T Fail	Unresolv.	38	0.3%	1.40	24.85	4.51	0.47	8.18	1.47	66.6%	67.1%	67.3%
	T Fail	Waiver	31	0.2%	3.06	27.74	4.59	2.95	24.48	4.58	3.6%	11.7%	0.3%
Total	Fail%		13,544	1.9%	0.24	3.24	0.97	0.23	3.07	0.95	4.3%	5.3%	1.7%
1997	Pass	-	8,006	0.18	2.76	0.82	0.18	2.76	0.82	-	-	-	
	T Fail	Pass	98	1.2%	0.55	13.45	1.32	0.22	3.71	0.98	60.6%	72.4%	25.5%
	T Fail	Unresolv.	9	0.1%	1.12	19.27	2.15	0.38	6.43	0.71	66.2%	66.6%	67.2%
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		8,113	1.3%	0.19	2.91	0.83	0.18	2.78	0.82	2.6%	4.5%	0.7%
1998	Pass	-	18,314	0.13	1.93	0.67	0.13	1.93	0.67	-	-	-	
	T Fail	Pass	73	0.4%	0.46	14.31	1.37	0.12	1.89	0.72	74.4%	86.8%	47.2%
	T Fail	Unresolv.	6	0.0%	0.51	8.74	1.15	0.17	2.88	0.38	67.0%	67.0%	67.0%
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		18,393	0.4%	0.13	1.98	0.68	0.13	1.93	0.67	1.1%	2.6%	0.4%
1999	Pass	-	8,654	0.11	1.39	0.50	0.11	1.39	0.50	-	-	-	
	T Fail	Pass	27	0.3%	1.67	24.61	1.22	0.14	1.18	0.67	91.8%	95.2%	44.7%
	T Fail	Unresolv.	1	0.0%	5.45	14.76	0.06	1.80	4.87	0.02	67.0%	67.0%	67.0%
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		8,682	0.3%	0.11	1.46	0.50	0.11	1.39	0.50	4.6%	5.1%	0.3%
2000	Pass	-	3,310	0.08	0.98	0.35	0.08	0.98	0.35	-	-	-	
	T Fail	Pass	8	0.2%	0.09	1.70	0.46	0.06	1.09	0.48	32.1%	36.0%	-3.1%
	T Fail	Unresolv.	2	0.1%	0.03	0.94	0.12	0.01	0.31	0.04	67.0%	67.0%	67.0%
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		3,320	0.3%	0.08	0.98	0.35	0.08	0.98	0.35	0.1%	0.2%	0.0%
2001	Pass	-	90	0.05	1.12	0.24	0.05	1.12	0.24	-	-	-	
	T Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		90	-	0.05	1.12	0.24	0.05	1.12	0.24	-	-	-
Total Trucks				-	-	-	-	-	-	-	-	-	-
All	Pass	-	123,472	0.58	6.46	1.60	0.58	6.46	1.60	-	-	-	-
T	Fail	Pass	4,943	3.8%	3.26	38.71	2.97	1.25	15.61	2.47	61.6%	59.7%	16.9%
	Fail	Unresolv.	1,112	0.8%	6.50	72.97	3.44	2.14	23.95	1.14	67.0%	67.2%	66.9%
	Fail	Waiver	1,435	1.1%	6.77	83.72	3.18	6.03	77.45	3.06	11.0%	7.5%	3.8%
Total	Fail%		130,962	5.7%	0.79	9.09	1.68	0.67	7.74	1.64	15.2%	14.9%	2.4%
Fleet Total				-	-	-	-	-	-	-	-	-	-
All	Pass	-	385,810	0.44	4.85	1.31	0.44	4.85	1.31	-	-	-	-
All	Fail	Pass	15,854	3.9%	2.69	37.53	2.32	0.84	9.85	1.98	68.6%	73.7%	14.6%
	Fail	Unresolv.	4,339	1.1%	5.49	68.54	2.77	1.80	22.55	0.91	67.1%	67.1%	67.1%
	Fail	Waiver	5,019	1.2%	5.29	70.59	2.80	4.69	65.36	2.72	11.2%	7.4%	2.7%
Total	Fail%		411,022	6.1%	0.64	7.59	1.38	0.52	5.97	1.35	18.4%	21.3%	2.4%

Appendix B1 IM240 Test Emissions Reductions - RapidScreen Audit Vehicles

Unresolved fails remaining in area

Model Year/Type	First Result	Last Result	Vehicles	0.33			Final			Reduction %				
				HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX		
1981	Pass	-	0	-	-	-	-	-	-	-	-	-		
	P	Fail	Pass	0	-	-	-	-	-	-	-	-		
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-		
		Fail	Waiver	0	-	-	-	-	-	-	-	-		
Total	Fail%		0	-	-	-	-	-	-	-	-	-		
1982	Pass	-	1	1.64	27.33	0.92	1.64	27.33	0.92	-	-	-		
	P	Fail	Pass	0	-	-	-	-	-	-	-	-		
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-		
		Fail	Waiver	0	-	-	-	-	-	-	-	-		
Total	Fail%		1	-	1.64	27.33	0.92	1.64	27.33	0.92	-	-	-	
1983	Pass	-	1	0.19	1.60	1.56	0.19	1.60	1.56	-	-	-		
	P	Fail	Pass	0	-	-	-	-	-	-	-	-		
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-		
		Fail	Waiver	0	-	-	-	-	-	-	-	-		
Total	Fail%		1	-	0.19	1.60	1.56	0.19	1.60	1.56	-	-	-	
1984	Pass	-	2	0.54	10.76	2.77	0.54	10.76	2.77	-	-	-		
	P	Fail	Pass	0	-	-	-	-	-	-	-	-		
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-		
		Fail	Waiver	0	-	-	-	-	-	-	-	-		
Total	Fail%		2	-	0.54	10.76	2.77	0.54	10.76	2.77	-	-	-	
1985	Pass	-	1	0.58	4.02	2.86	0.58	4.02	2.86	-	-	-		
	P	Fail	Pass	0	-	-	-	-	-	-	-	-		
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-		
		Fail	Waiver	0	-	-	-	-	-	-	-	-		
Total	Fail%		1	-	0.58	4.02	2.86	0.58	4.02	2.86	-	-	-	
1986	Pass	-	15	0.72	7.83	2.33	0.72	7.83	2.33	-	-	-		
	P	Fail	Pass	2	11.1%	0.61	24.95	0.21	0.66	5.05	0.82	-8.3%	79.8%	-289.1%
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	1	5.6%	4.22	22.59	6.00	4.60	18.43	2.67	-8.9%	18.4%	55.5%
Total	Fail%		18	16.7%	0.90	10.55	2.30	0.93	8.11	2.18	-2.9%	23.1%	5.1%	
1987	Pass	-	3	0.64	7.56	1.69	0.64	7.56	1.69	-	-	-		
	P	Fail	Pass	1	25.0%	2.70	78.79	0.54	0.96	31.63	2.10	64.4%	59.9%	-289.0%
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		4	25.0%	1.16	25.37	1.41	0.72	13.58	1.80	37.6%	46.5%	-27.8%	
1988	Pass	-	50	0.51	4.46	1.51	0.51	4.46	1.51	-	-	-		
	P	Fail	Pass	2	3.7%	0.17	6.25	0.60	0.25	6.91	0.86	-42.5%	-10.7%	-44.6%
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	2	3.7%	4.48	74.47	2.48	3.41	61.15	1.50	23.9%	17.9%	39.5%
Total	Fail%		54	7.4%	0.65	7.12	1.51	0.61	6.65	1.49	5.7%	6.6%	1.7%	
1989	Pass	-	11	0.77	4.56	1.60	0.77	4.56	1.60	-	-	-		
	P	Fail	Pass	1	8.3%	0.80	4.63	1.61	0.90	4.66	1.74	-13.3%	-0.5%	-8.3%
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		12	8.3%	0.77	4.57	1.60	0.78	4.57	1.61	-1.1%	-0.0%	-0.7%	
1990	Pass	-	165	0.49	4.39	1.85	0.49	4.39	1.85	-	-	-		
	P	Fail	Pass	6	3.5%	1.00	12.17	2.40	0.57	6.44	2.40	43.4%	47.1%	0.1%
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		171	3.5%	0.51	4.67	1.87	0.50	4.46	1.87	3.0%	4.3%	0.0%	
1991	Pass	-	17	0.26	3.47	1.27	0.26	3.47	1.27	-	-	-		
	P	Fail	Pass	2	10.0%	1.44	28.81	1.69	0.37	2.67	1.89	74.7%	90.7%	-11.9%
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	1	5.0%	3.07	31.12	2.93	2.95	17.01	2.51	3.8%	45.3%	14.2%
Total	Fail%		20	15.0%	0.52	7.39	1.39	0.41	4.07	1.39	21.8%	44.9%	0.0%	
1992	Pass	-	224	0.34	3.89	1.20	0.34	3.89	1.20	-	-	-		
	P	Fail	Pass	4	1.7%	1.32	7.18	3.45	0.47	4.03	1.93	64.6%	43.8%	44.2%
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	1	0.4%	1.03	8.48	4.23	0.98	9.25	4.33	4.9%	-9.1%	-2.4%

Appendix B1 IM240 Test Emissions Reductions - RapidScreen Audit Vehicles

Unresolved fails remaining in area				0.33			Final			Reduction %			
Model	First Result	Last Result	Vehicles	Initial HC	Initial CO	Initial NOX	Final HC	Final CO	Final NOX	HC	CO	NOX	
Total	Fail%		229	2.2%	0.36	3.97	1.25	0.35	3.92	1.22	4.2%	1.3%	2.1%
1993 P	Pass	-	42		0.36	3.90	1.36	0.36	3.90	1.36	-	-	-
	Fail	Pass	1	2.3%	0.26	3.74	1.72	0.37	4.22	1.80	-38.9%	-12.8%	-5.0%
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		43	2.3%	0.36	3.90	1.37	0.36	3.91	1.37	-0.7%	-0.3%	-0.1%
1994 P	Pass	-	453		0.27	3.23	0.94	0.27	3.23	0.94	-	-	-
	Fail	Pass	7	1.5%	2.23	7.50	1.89	0.34	3.81	1.21	84.7%	49.2%	36.0%
	Fail	Unresolv.	2	0.4%	2.54	9.98	3.99	0.84	3.29	1.32	67.0%	67.0%	67.0%
	Fail	Waiver	3	0.6%	1.97	16.16	3.66	1.92	9.78	3.11	2.5%	39.5%	15.0%
Total	Fail%		465	2.6%	0.32	3.40	0.99	0.29	3.28	0.96	11.1%	3.7%	2.6%
1995 P	Pass	-	69		0.31	2.94	0.79	0.31	2.94	0.79	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		69	-	0.31	2.94	0.79	0.31	2.94	0.79	-	-	-
1996 P	Pass	-	593		0.15	1.97	0.63	0.15	1.97	0.63	-	-	-
	Fail	Pass	8	1.3%	0.39	13.71	0.66	0.09	3.10	0.74	78.1%	77.4%	-13.4%
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		601	1.3%	0.16	2.13	0.63	0.15	1.98	0.63	2.6%	6.6%	-0.2%
1997 P	Pass	-	74		0.14	1.61	0.49	0.14	1.61	0.49	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		74	-	0.14	1.61	0.49	0.14	1.61	0.49	-	-	-
1998 P	Pass	-	621		0.08	1.27	0.36	0.08	1.27	0.36	-	-	-
	Fail	Pass	8	1.3%	0.73	3.53	0.63	0.11	0.97	0.31	84.4%	72.6%	51.0%
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		629	1.3%	0.09	1.30	0.36	0.08	1.26	0.36	8.8%	2.5%	1.1%
1999 P	Pass	-	80		0.09	1.46	0.36	0.09	1.46	0.36	-	-	-
	Fail	Pass	1	1.2%	0.00	1.60	0.39	0.03	2.53	0.30	-3317.2%	-58.4%	22.8%
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		81	1.2%	0.09	1.46	0.36	0.09	1.47	0.36	-0.4%	-0.8%	0.3%
2000 P	Pass	-	0		-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
2001 P	Pass	-	0		-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
Total Passenger Vehicles													
All	Pass	-	2,422		0.22	2.54	0.80	0.22	2.54	0.80	-	-	-
P	Fail	Pass	43	1.7%	1.02	11.65	1.42	0.33	4.33	1.21	68.1%	62.8%	14.6%
	Fail	Unresolv.	2	0.1%	2.54	9.98	3.99	0.84	3.29	1.32	67.0%	67.0%	67.0%
	Fail	Waiver	8	0.3%	2.90	32.45	3.64	2.64	24.54	2.73	9.0%	24.4%	24.9%
Total	Fail%		2,475	2.1%	0.24	2.80	0.82	0.23	2.64	0.81	5.9%	5.7%	1.1%
1981 T	Pass	-	0		-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-

Appendix B1 IM240 Test Emissions Reductions - RapidScreen Audit Vehicles

Unresolved fails remaining in area

Model Year/Type	First Result	Last Result	Vehicles	0.33			Final			Reduction %			
				HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX	
1982	Pass	-	0	-	-	-	-	-	-	-	-	-	
	T Fail	Pass	0	-	-	-	-	-	-	-	-	-	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	
1983	Pass	-	0	-	-	-	-	-	-	-	-	-	
	T Fail	Pass	0	-	-	-	-	-	-	-	-	-	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	
1984	Pass	-	0	-	-	-	-	-	-	-	-	-	
	T Fail	Pass	1 100.0%	1.15	6.99	0.73	0.32	0.65	0.86	72.3%	90.8%	-18.0%	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		1 100.0%	1.15	6.99	0.73	0.32	0.65	0.86	72.3%	90.8%	-18.0%	
1985	Pass	-	0	-	-	-	-	-	-	-	-	-	
	T Fail	Pass	0	-	-	-	-	-	-	-	-	-	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	
1986	Pass	-	7	0.67	3.17	1.58	0.67	3.17	1.58	-	-	-	
	T Fail	Pass	0	-	-	-	-	-	-	-	-	-	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		7	-	0.67	3.17	1.58	0.67	3.17	1.58	-	-	-
1987	Pass	-	1	0.22	0.14	1.23	0.22	0.14	1.23	-	-	-	
	T Fail	Pass	0	-	-	-	-	-	-	-	-	-	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		1	-	0.22	0.14	1.23	0.22	0.14	1.23	-	-	-
1988	Pass	-	5	0.49	4.09	1.24	0.49	4.09	1.24	-	-	-	
	T Fail	Pass	1 16.7%	0.92	5.10	3.33	0.99	14.36	3.09	-7.1%	-181.4%	7.3%	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		6 16.7%	0.56	4.26	1.59	0.57	5.80	1.55	-2.0%	-36.2%	2.5%	
1989	Pass	-	1	1.07	48.50	2.13	1.07	48.50	2.13	-	-	-	
	T Fail	Pass	0	-	-	-	-	-	-	-	-	-	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		1	-	1.07	48.50	2.13	1.07	48.50	2.13	-	-	-
1990	Pass	-	26	0.88	9.79	2.43	0.88	9.79	2.43	-	-	-	
	T Fail	Pass	1 3.7%	0.50	9.53	1.91	0.14	3.96	0.66	72.2%	58.5%	65.4%	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		27 3.7%	0.87	9.78	2.41	0.85	9.57	2.37	1.5%	2.1%	1.9%	
1991	Pass	-	6	0.52	6.66	2.00	0.52	6.66	2.00	-	-	-	
	T Fail	Pass	1 14.3%	0.18	4.85	0.96	0.10	1.90	0.77	46.5%	60.9%	19.8%	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		7 14.3%	0.47	6.40	1.85	0.46	5.98	1.83	2.5%	6.6%	1.5%	
1992	Pass	-	113	0.69	7.04	2.09	0.69	7.04	2.09	-	-	-	
	T Fail	Pass	2 1.7%	1.94	29.42	3.46	1.09	21.44	2.76	43.9%	27.1%	20.1%	
	T Fail	Unresolv.	1 0.9%	7.62	18.00	0.67	2.52	5.94	0.22	67.0%	67.0%	67.0%	
	T Fail	Waiver	1 0.9%	4.37	26.76	5.28	3.78	19.84	5.74	13.5%	25.8%	-8.7%	
Total	Fail%		117 3.4%	0.80	7.68	2.13	0.74	7.39	2.12	7.9%	3.9%	0.6%	
1993	Pass	-	14	0.52	4.56	1.73	0.52	4.56	1.73	-	-	-	
	T Fail	Pass	0	-	-	-	-	-	-	-	-	-	
	T Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
	T Fail	Waiver	0	-	-	-	-	-	-	-	-	-	

Appendix B1 IM240 Test Emissions Reductions - RapidScreen Audit Vehicles

Unresolved fails remaining in area

Model Year/Type	First Result	Last Result	Vehicles	0.33			HC	Initial CO	NOX	HC	Final CO	NOX	Reduction %		
													HC	CO	NOX
Total	Fail%		14	-	0.52	4.56	1.73	0.52	4.56	1.73	-	-	-	-	-
1994	Pass	-	286		0.55	5.32	1.49	0.55	5.32	1.49	-	-	-	-	-
	T	Fail	Pass	6	2.0%	1.42	10.94	2.30	0.67	5.95	1.37	52.8%	45.6%	40.3%	
		Fail	Unresolv.	2	0.7%	2.31	43.05	3.11	0.76	14.21	1.03	67.0%	67.0%	67.0%	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-	-
Total	Fail%		294	2.7%	0.58	5.69	1.51	0.55	5.39	1.48	4.5%	5.2%	2.2%		
1995	Pass	-	26		0.60	6.65	1.89	0.60	6.65	1.89	-	-	-	-	-
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-	-
Total	Fail%		26	-	0.60	6.65	1.89	0.60	6.65	1.89	-	-	-	-	-
1996	Pass	-	286		0.18	2.44	0.89	0.18	2.44	0.89	-	-	-	-	-
	T	Fail	Pass	5	1.7%	0.21	3.52	0.94	0.29	4.85	1.29	-39.0%	-38.0%	-37.3%	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-	-
Total	Fail%		291	1.7%	0.18	2.46	0.89	0.18	2.48	0.90	-0.8%	-0.9%	-0.7%		
1997	Pass	-	43		0.16	2.95	0.86	0.16	2.95	0.86	-	-	-	-	-
	T	Fail	Pass	1	2.3%	0.09	0.94	1.38	0.17	3.93	1.87	-94.2%	-318.1%	-35.8%	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-	-
Total	Fail%		44	2.3%	0.16	2.90	0.87	0.16	2.97	0.88	-1.2%	-2.3%	-1.3%		
1998	Pass	-	394		0.12	1.70	0.63	0.12	1.70	0.63	-	-	-	-	-
	T	Fail	Pass	2	0.5%	0.13	1.73	0.44	0.05	1.98	0.25	63.9%	-14.4%	43.0%	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-	-
Total	Fail%		396	0.5%	0.12	1.70	0.63	0.12	1.70	0.62	0.4%	-0.1%	0.2%		
1999	Pass	-	58		0.10	1.25	0.47	0.10	1.25	0.47	-	-	-	-	-
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-	-
Total	Fail%		58	-	0.10	1.25	0.47	0.10	1.25	0.47	-	-	-	-	-
2000	Pass	-	0		-	-	-	-	-	-	-	-	-	-	-
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	-	-
2001	Pass	-	0		-	-	-	-	-	-	-	-	-	-	-
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-	-
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	-	-
Total Trucks															
All	Pass	-	1,266		0.32	3.56	1.10	0.32	3.56	1.10	-	-	-	-	-
T	Fail	Pass	20	1.6%	0.83	8.65	1.73	0.47	6.58	1.40	42.8%	23.9%	19.2%		
	Fail	Unresolv.	3	0.2%	4.08	34.70	2.30	1.35	11.45	0.76	67.0%	67.0%	67.0%		
	Fail	Waiver	1	0.1%	4.37	26.76	5.28	3.78	19.84	5.74	13.5%	25.8%	-8.7%		
Total	Fail%		1,290	1.9%	0.34	3.73	1.12	0.33	3.64	1.11	3.6%	2.5%	0.7%		
Fleet Total															
All	Pass	-	3,688		0.25	2.89	0.90	0.25	2.89	0.90	-	-	-	-	-
All	Fail	Pass	63	1.7%	0.96	10.70	1.52	0.37	5.05	1.27	61.2%	52.8%	16.3%		
	Fail	Unresolv.	5	0.1%	3.47	24.81	2.97	1.14	8.19	0.98	67.0%	67.0%	67.0%		
	Fail	Waiver	9	0.2%	3.06	31.82	3.82	2.77	24.02	3.07	9.7%	24.5%	19.7%		
Total	Fail%		3,765	2.0%	0.28	3.12	0.92	0.26	2.98	0.91	4.9%	4.3%	0.9%		

Appendix B2 Enhanced Idle Test Emissions Reductions

Unresolved fails remaining in area											
Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Reduction %			
					Initial HC	Initial CO	Initial NOX	Final HC	Final CO	Final NOX	
1981	Pass	-	6,553		200.32	1.37	-	200.32	1.37	-	
	P	Fail	Pass	618	8.0%	1,036.42	4.27	-	266.99	1.98	-
		Fail	Unresolv.	277	3.6%	1,350.24	3.94	-	455.54	1.30	-
		Fail	Waiver	282	3.6%	1,411.82	4.53	-	1,351.20	4.02	-
Total	Fail%		7,730	15.2%	352.56	1.81	-	256.78	1.51	-	
1982	Pass	-	80		86.29	0.18	-	86.29	0.18	-	
	P	Fail	Pass	16	12.7%	552.81	1.26	-	132.06	0.67	-
		Fail	Unresolv.	24	19.0%	777.83	2.61	-	246.63	0.90	-
		Fail	Waiver	6	4.8%	512.33	2.52	-	830.67	3.42	-
Total	Fail%		126	36.5%	297.54	0.89	-	158.09	0.53	-	
1983	Pass	-	35		82.54	0.26	-	82.54	0.26	-	
	P	Fail	Pass	6	9.4%	513.33	1.10	-	64.17	0.25	-
		Fail	Unresolv.	19	29.7%	784.84	2.64	-	227.40	0.84	-
		Fail	Waiver	4	6.3%	394.25	1.19	-	202.00	2.18	-
Total	Fail%		64	45.3%	350.91	1.10	-	131.29	0.55	-	
1984	Pass	-	186		79.29	0.17	-	79.29	0.17	-	
	P	Fail	Pass	29	11.6%	244.90	1.55	-	87.38	0.35	-
		Fail	Unresolv.	21	8.4%	777.43	3.13	-	238.56	1.03	-
		Fail	Waiver	14	5.6%	614.14	3.94	-	908.29	1.80	-
Total	Fail%		250	25.6%	187.10	0.79	-	140.03	0.36	-	
1985	Pass	-	94		77.95	0.14	-	77.95	0.14	-	
	P	Fail	Pass	9	7.3%	429.00	1.59	-	74.44	0.14	-
		Fail	Unresolv.	15	12.2%	728.53	2.83	-	226.07	0.93	-
		Fail	Waiver	5	4.1%	636.00	1.36	-	926.80	1.79	-
Total	Fail%		123	23.6%	205.66	0.62	-	130.26	0.30	-	
1986	Pass	-	260		92.79	0.20	-	92.79	0.20	-	
	P	Fail	Pass	25	7.5%	575.00	1.92	-	100.60	0.48	-
		Fail	Unresolv.	41	12.3%	877.34	2.53	-	291.29	0.86	-
		Fail	Waiver	8	2.4%	805.00	2.60	-	806.63	2.99	-
Total	Fail%		334	22.2%	242.25	0.67	-	134.84	0.37	-	
1987	Pass	-	82		69.89	0.19	-	69.89	0.19	-	
	P	Fail	Pass	9	8.1%	505.33	1.84	-	133.89	0.32	-
		Fail	Unresolv.	18	16.2%	633.28	2.58	-	206.62	0.84	-
		Fail	Waiver	2	1.8%	542.50	0.70	-	1,268.50	2.73	-
Total	Fail%		111	26.1%	205.07	0.72	-	118.85	0.35	-	
1988	Pass	-	258		87.05	0.21	-	87.05	0.21	-	
	P	Fail	Pass	21	7.0%	306.62	0.77	-	116.86	0.28	-
		Fail	Unresolv.	11	3.7%	417.36	1.21	-	141.57	0.42	-
		Fail	Waiver	11	3.7%	1,102.55	3.09	-	827.09	3.89	-
Total	Fail%		301	14.3%	151.55	0.39	-	118.17	0.36	-	
1989	Pass	-	92		79.55	0.17	-	79.55	0.17	-	
	P	Fail	Pass	5	5.0%	512.00	0.46	-	135.40	0.30	-
		Fail	Unresolv.	0	-	-	-	-	-	-	
		Fail	Waiver	3	3.0%	598.33	0.79	-	517.33	0.75	-
Total	Fail%		100	8.0%	116.74	0.20	-	95.48	0.19	-	
1990	Pass	-	370		73.18	0.17	-	73.18	0.17	-	
	P	Fail	Pass	24	5.9%	226.08	0.83	-	100.75	0.24	-
		Fail	Unresolv.	5	1.2%	1,029.20	2.40	-	339.64	0.79	-
		Fail	Waiver	5	1.2%	617.80	0.28	-	976.60	0.29	-
Total	Fail%		404	8.4%	100.83	0.24	-	89.30	0.18	-	
1991	Pass	-	248		70.19	0.15	-	70.19	0.15	-	
	P	Fail	Pass	12	4.5%	296.25	0.64	-	127.42	0.23	-
		Fail	Unresolv.	4	1.5%	1,025.00	1.11	-	338.25	0.37	-
		Fail	Waiver	3	1.1%	788.67	0.87	-	1,100.00	1.08	-
Total	Fail%		267	7.1%	102.72	0.19	-	88.34	0.16	-	
1992	Pass	-	1,140		63.43	0.14	-	63.43	0.14	-	
	P	Fail	Pass	28	2.4%	368.50	1.66	-	96.14	0.22	-
		Fail	Unresolv.	7	0.6%	679.86	2.74	-	226.62	0.92	-
		Fail	Waiver	9	0.8%	588.44	1.86	-	544.78	1.29	-

Appendix B2 Enhanced Idle Test Emissions Reductions

Unresolved fails remaining in area				33%			Final			Reduction %			
Model Year/Type	First Result	Last Result	Vehicles	Fail%	Initial HC	CO	NOX	HC	CO	NOX	HC	CO	NOX
Total	Fail%		1,184	3.7%	78.28	0.20	-	68.83	0.16	-	12.1%	24.1%	-
1993 P	Pass	-	348		62.33	0.11	-	62.33	0.11	-	-	-	-
	Fail	Pass	8	2.2%	228.25	1.38	-	81.50	0.28	-	64.3%	79.4%	-
	Fail	Unresolv.	2	0.6%	1,528.00	1.43	-	412.50	0.19	-	73.0%	86.5%	-
	Fail	Waiver	1	0.3%	789.00	8.11	-	601.00	6.54	-	23.8%	19.4%	-
Total	Fail%		359	3.1%	76.22	0.17	-	66.21	0.14	-	13.1%	20.7%	-
1994 P	Pass	-	1,407		54.39	0.11	-	54.39	0.11	-	-	-	-
	Fail	Pass	26	1.8%	134.65	0.23	-	83.31	0.16	-	38.1%	29.5%	-
	Fail	Unresolv.	1	0.1%	425.00	0.68	-	140.25	0.22	-	67.0%	67.0%	-
	Fail	Waiver	2	0.1%	253.50	0.42	-	284.50	0.51	-	-12.2%	-20.0%	-
Total	Fail%		1,436	2.0%	56.38	0.12	-	55.29	0.12	-	1.9%	1.2%	-
1995 P	Pass	-	470		42.69	0.09	-	42.69	0.09	-	-	-	-
	Fail	Pass	7	1.5%	50.00	0.09	-	43.00	0.06	-	14.0%	27.4%	-
	Fail	Unresolv.	2	0.4%	1,304.50	0.73	-	430.49	0.24	-	67.0%	67.0%	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		479	1.9%	48.07	0.09	-	44.32	0.09	-	7.8%	2.7%	-
1996 P	Pass	-	1,270		34.36	0.06	-	34.36	0.06	-	-	-	-
	Fail	Pass	13	1.0%	80.69	0.17	-	19.23	0.03	-	76.2%	80.4%	-
	Fail	Unresolv.	2	0.2%	429.50	0.45	-	141.74	0.15	-	67.0%	67.0%	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		1,285	1.2%	35.44	0.06	-	34.37	0.06	-	3.0%	3.0%	-
1997 P	Pass	-	653		35.18	0.05	-	35.18	0.05	-	-	-	-
	Fail	Pass	4	0.6%	108.50	1.33	-	16.00	0.13	-	85.3%	89.8%	-
	Fail	Unresolv.	1	0.2%	4.00	-	-	1.32	-	-	67.0%	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		658	0.8%	35.58	0.05	-	35.01	0.05	-	1.6%	13.7%	-
1998 P	Pass	-	1,663		31.66	0.04	-	31.66	0.04	-	-	-	-
	Fail	Pass	11	0.7%	73.64	0.08	-	54.27	0.11	-	26.3%	-37.9%	-
	Fail	Unresolv.	1	0.1%	36.00	0.03	-	11.88	0.01	-	67.0%	67.0%	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		1,675	0.7%	31.94	0.04	-	31.80	0.04	-	0.4%	-0.4%	-
1999 P	Pass	-	596		20.03	0.03	-	20.03	0.03	-	-	-	-
	Fail	Pass	4	0.7%	160.25	0.66	-	39.75	0.03	-	75.2%	95.1%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		600	0.7%	20.97	0.04	-	20.17	0.03	-	3.8%	11.3%	-
2000 P	Pass	-	232		12.31	0.01	-	12.31	0.01	-	-	-	-
	Fail	Pass	1	0.4%	4.00	-	-	6.00	-	-	-50.0%	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		233	0.4%	12.28	0.01	-	12.29	0.01	-	-0.1%	-	-
2001 P	Pass	-	13		8.54	0.02	-	8.54	0.02	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		13	-	8.54	0.02	-	8.54	0.02	-	-	-	-
Total Passenger Vehicles													
All	Pass	-	16,050		110.49	0.61	-	110.49	0.61	-	-	-	-
P	Fail	Pass	876	4.9%	821.04	3.32	-	215.06	1.48	-	73.8%	55.4%	-
	Fail	Unresolv.	451	2.5%	1,125.96	3.36	-	374.29	1.11	-	66.8%	66.9%	-
	Fail	Waiver	355	2.0%	1,262.13	4.08	-	1,234.02	3.65	-	2.2%	10.5%	-
Total	Fail%		17,732	9.5%	194.48	0.89	-	144.86	0.73	-	25.5%	17.7%	-
1981 T	Pass	-	2,706		220.79	1.90	-	220.79	1.90	-	-	-	-
	Fail	Pass	422	11.9%	1,100.27	4.36	-	251.14	1.91	-	77.2%	56.1%	-
	Fail	Unresolv.	192	5.4%	1,338.59	3.86	-	441.74	1.34	-	67.0%	65.1%	-
	Fail	Waiver	212	6.0%	1,431.40	4.33	-	1,356.24	4.03	-	5.3%	6.8%	-
Total	Fail%		3,532	23.4%	459.30	2.45	-	304.58	2.00	-	33.7%	18.2%	-

Appendix B2 Enhanced Idle Test Emissions Reductions

Unresolved fails remaining in area							33%			Reduction %		
Model	First Result	Last Result	Vehicles	Fail%	Initial		Final		HC	CO	NOX	
Year/Type					HC	CO	NOX		HC	CO	NOX	
1982	Pass	-	72		90.61	0.25	-	90.61	0.25	-	-	-
T	Fail	Pass	16	11.7%	506.81	2.27	-	115.44	0.32	-	77.2%	85.7%
	Fail	Unresolv.	25	18.2%	535.08	2.69	-	167.88	0.85	-	68.6%	68.6%
	Fail	Waiver	24	17.5%	881.08	1.88	-	784.67	2.14	-	10.9%	-14.2%
Total	Fail%		137	47.4%	358.80	1.21	-	229.20	0.70	-	36.1%	42.6%
1983	Pass	-	32		116.31	0.38	-	116.31	0.38	-	-	-
T	Fail	Pass	11	16.7%	551.91	2.24	-	96.64	0.33	-	82.5%	85.1%
	Fail	Unresolv.	18	27.3%	673.39	3.56	-	182.67	1.14	-	72.9%	67.9%
	Fail	Waiver	5	7.6%	1,565.40	4.00	-	838.60	2.90	-	46.4%	27.5%
Total	Fail%		66	51.5%	450.62	1.83	-	185.85	0.77	-	58.8%	57.9%
1984	Pass	-	125		86.78	0.30	-	86.78	0.30	-	-	-
T	Fail	Pass	46	18.3%	438.24	1.45	-	97.00	0.20	-	77.9%	86.0%
	Fail	Unresolv.	49	19.5%	537.84	3.38	-	181.78	1.07	-	66.2%	68.4%
	Fail	Waiver	31	12.4%	541.45	2.45	-	731.55	2.93	-	-35.1%	-19.4%
Total	Fail%		251	50.2%	295.40	1.38	-	186.83	0.76	-	36.8%	45.0%
1985	Pass	-	70		85.36	0.29	-	85.36	0.29	-	-	-
T	Fail	Pass	15	11.6%	368.73	1.14	-	121.60	0.38	-	67.0%	66.6%
	Fail	Unresolv.	28	21.7%	473.86	1.91	-	164.80	0.65	-	65.2%	66.3%
	Fail	Waiver	16	12.4%	1,214.50	2.54	-	635.38	3.13	-	47.7%	-23.2%
Total	Fail%		129	45.7%	342.68	1.02	-	175.03	0.73	-	48.9%	28.5%
1986	Pass	-	297		100.79	0.23	-	100.79	0.23	-	-	-
T	Fail	Pass	57	13.3%	344.53	1.66	-	102.09	0.31	-	70.4%	81.5%
	Fail	Unresolv.	42	9.8%	1,006.76	2.73	-	340.67	0.87	-	66.2%	68.3%
	Fail	Waiver	33	7.7%	683.61	2.34	-	942.94	2.64	-	-37.9%	-12.6%
Total	Fail%		429	30.8%	266.70	0.83	-	189.23	0.49	-	29.0%	41.1%
1987	Pass	-	123		101.30	0.21	-	101.30	0.21	-	-	-
T	Fail	Pass	20	12.3%	228.80	1.22	-	98.50	0.22	-	56.9%	82.1%
	Fail	Unresolv.	11	6.7%	443.09	4.53	-	135.99	1.53	-	69.3%	66.3%
	Fail	Waiver	9	5.5%	174.67	1.70	-	161.44	1.57	-	7.6%	7.8%
Total	Fail%		163	24.5%	144.06	0.71	-	106.62	0.38	-	26.0%	46.8%
1988	Pass	-	357		96.12	0.24	-	96.12	0.24	-	-	-
T	Fail	Pass	42	9.3%	371.86	1.39	-	113.93	0.27	-	69.4%	80.4%
	Fail	Unresolv.	32	7.1%	675.41	2.29	-	231.43	0.88	-	65.7%	61.8%
	Fail	Waiver	21	4.6%	617.33	1.71	-	673.81	1.91	-	-9.1%	-12.0%
Total	Fail%		452	21.0%	186.97	0.56	-	134.19	0.36	-	28.2%	34.8%
1989	Pass	-	109		89.65	0.20	-	89.65	0.20	-	-	-
T	Fail	Pass	15	10.5%	225.73	1.81	-	102.20	0.34	-	54.7%	80.9%
	Fail	Unresolv.	13	9.1%	687.77	3.28	-	252.55	1.15	-	63.3%	64.9%
	Fail	Waiver	6	4.2%	484.67	3.07	-	538.17	2.43	-	-11.0%	20.9%
Total	Fail%		143	23.8%	174.87	0.77	-	124.60	0.39	-	28.8%	48.8%
1990	Pass	-	298		94.35	0.23	-	94.35	0.23	-	-	-
T	Fail	Pass	23	6.9%	357.43	1.89	-	97.30	0.32	-	72.8%	83.2%
	Fail	Unresolv.	6	1.8%	555.00	3.90	-	183.15	1.29	-	67.0%	67.0%
	Fail	Waiver	5	1.5%	1,410.40	3.26	-	1,059.20	2.41	-	24.9%	26.3%
Total	Fail%		332	10.2%	140.72	0.46	-	110.69	0.29	-	21.3%	36.7%
1991	Pass	-	121		73.55	0.19	-	73.55	0.19	-	-	-
T	Fail	Pass	4	3.1%	203.75	0.25	-	112.50	0.08	-	44.8%	66.0%
	Fail	Unresolv.	2	1.5%	161.50	1.06	-	53.30	0.35	-	67.0%	67.0%
	Fail	Waiver	4	3.1%	327.50	2.01	-	214.00	1.91	-	34.7%	5.1%
Total	Fail%		131	7.6%	86.62	0.26	-	78.71	0.24	-	9.1%	7.2%
1992	Pass	-	374		84.94	0.20	-	84.94	0.20	-	-	-
T	Fail	Pass	23	5.7%	245.83	0.72	-	104.00	0.23	-	57.7%	68.2%
	Fail	Unresolv.	5	1.2%	1,738.00	0.72	-	553.54	0.45	-	68.2%	36.6%
	Fail	Waiver	4	1.0%	524.75	0.28	-	624.50	0.30	-	-19.0%	-7.1%
Total	Fail%		406	7.9%	118.75	0.23	-	97.11	0.20	-	18.2%	13.3%
1993	Pass	-	196		82.04	0.23	-	82.04	0.23	-	-	-
T	Fail	Pass	5	2.5%	155.40	0.65	-	73.80	0.22	-	52.5%	67.0%
	Fail	Unresolv.	3	1.5%	160.67	2.95	-	63.80	0.72	-	60.3%	75.7%
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-

Appendix B2 Enhanced Idle Test Emissions Reductions

Unresolved fails remaining in area					33%						Reduction %		
Model	First Result	Last Result	Vehicles	Fail%	Initial	CO	NOX	Final	CO	NOX	HC	CO	NOX
Total	Fail%		204	3.9%	85.00	0.28	-	81.57	0.23	-	4.0%	15.7%	-
1994 T	Pass	-	829		70.22	0.24	-	70.22	0.24	-	-	-	-
	Fail	Pass	18	2.1%	257.17	2.19	-	98.00	0.27	-	61.9%	87.9%	-
	Fail	Unresolv.	3	0.4%	495.00	0.54	-	163.35	0.18	-	67.0%	67.0%	-
	Fail	Waiver	3	0.4%	582.67	0.68	-	556.00	0.67	-	4.6%	2.0%	-
Total	Fail%		853	2.8%	77.47	0.29	-	72.85	0.25	-	6.0%	14.5%	-
1995 T	Pass	-	181		52.12	0.18	-	52.12	0.18	-	-	-	-
	Fail	Pass	2	1.1%	488.50	0.72	-	88.50	0.05	-	81.9%	93.0%	-
	Fail	Unresolv.	2	1.1%	621.00	3.72	-	257.90	1.13	-	58.5%	69.7%	-
	Fail	Waiver	1	0.5%	244.00	0.41	-	306.00	0.38	-	-25.4%	7.3%	-
Total	Fail%		186	2.7%	63.96	0.23	-	56.08	0.19	-	12.3%	15.4%	-
1996 T	Pass	-	932		33.32	0.10	-	33.32	0.10	-	-	-	-
	Fail	Pass	11	1.2%	33.27	0.12	-	26.73	0.09	-	19.7%	26.4%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		943	1.2%	33.32	0.10	-	33.24	0.10	-	0.2%	0.4%	-
1997 T	Pass	-	704		23.30	0.05	-	23.30	0.05	-	-	-	-
	Fail	Pass	4	0.6%	11.75	-	-	41.25	0.19	-	-251.1%	-	-
	Fail	Unresolv.	3	0.4%	136.67	0.97	-	45.10	0.32	-	67.0%	67.0%	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		711	1.0%	23.71	0.06	-	23.49	0.05	-	0.9%	3.0%	-
1998 T	Pass	-	2,197		23.04	0.07	-	23.04	0.07	-	-	-	-
	Fail	Pass	8	0.4%	22.88	0.02	-	11.13	0.01	-	51.4%	30.8%	-
	Fail	Unresolv.	1	0.0%	1,639.00	2.15	-	540.87	0.71	-	67.0%	67.0%	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		2,206	0.4%	23.78	0.07	-	23.23	0.07	-	2.3%	1.0%	-
1999 T	Pass	-	673		19.38	0.04	-	19.38	0.04	-	-	-	-
	Fail	Pass	4	0.6%	7.75	-	-	25.00	0.02	-	-222.6%	-	-
	Fail	Unresolv.	1	0.1%	13.00	-	-	4.29	-	-	67.0%	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		678	0.7%	19.30	0.04	-	19.39	0.04	-	-0.5%	-0.3%	-
2000 T	Pass	-	230		12.84	0.03	-	12.84	0.03	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		230	-	12.84	0.03	-	12.84	0.03	-	-	-	-
2001 T	Pass	-	6		3.17	-	-	3.17	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		6	-	3.17	-	-	3.17	-	-	-	-	-
Total Trucks													
All	Pass	-	10,632		91.95	0.58	-	91.95	0.58	-	-	-	-
T	Fail	Pass	746	6.1%	762.87	3.08	-	184.08	1.19	-	75.9%	61.2%	-
	Fail	Unresolv.	436	3.6%	957.47	3.26	-	316.89	1.11	-	66.9%	66.0%	-
	Fail	Waiver	374	3.1%	1,125.94	3.41	-	1,080.12	3.32	-	4.1%	2.6%	-
Total	Fail%		12,188	12.8%	195.71	0.92	-	135.96	0.72	-	30.5%	21.3%	-
Fleet Total													
All	Pass	-	26,682		103.10	0.60	-	103.10	0.60	-	-	-	-
All	Fail	Pass	1,622	5.4%	794.29	3.21	-	200.81	1.35	-	74.7%	58.0%	-
	Fail	Unresolv.	887	3.0%	1,043.14	3.32	-	346.08	1.11	-	66.8%	66.5%	-
	Fail	Waiver	729	2.4%	1,192.26	3.73	-	1,155.06	3.48	-	3.1%	6.8%	-
Total	Fail%		29,920	10.8%	194.98	0.90	-	141.23	0.73	-	27.6%	19.2%	-

Appendix B2 Enhanced Idle Test Emissions Reductions - RapidScreen Audit Vehicles

Unresolved fails remaining in area						33%			Reduction %		
Model Year/Type	First Result	Last Result	Vehicles	Fail%		Initial			Final		
						HC	CO	NOX	HC	CO	NOX
1981	Pass	-	0		-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1982	Pass	-	0		-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1983	Pass	-	0		-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1984	Pass	-	0		-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1985	Pass	-	0		-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1986	Pass	-	0		-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1987	Pass	-	0		-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1988	Pass	-	1	94.00	-	-	94.00	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		1	-	94.00	-	-	94.00	-	-	-
1989	Pass	-	0		-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1990	Pass	-	4	55.75	0.04	-	55.75	0.04	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		4	55.75	0.04	-	55.75	0.04	-	-	-
1991	Pass	-	0		-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1992	Pass	-	10	100.00	0.20	-	100.00	0.20	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-

Appendix B2 Enhanced Idle Test Emissions Reductions - RapidScreen Audit Vehicles

Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Final			Reduction %		
					HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX
Total	Fail%		10	-	100.00	0.20	-	100.00	0.20	-	-	-	-
1993 P	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1994 P	Pass	-	19	-	44.05	0.15	-	44.05	0.15	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		19	-	44.05	0.15	-	44.05	0.15	-	-	-	-
1995 P	Pass	-	1	-	10.00	0.04	-	10.00	0.04	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		1	-	10.00	0.04	-	10.00	0.04	-	-	-	-
1996 P	Pass	-	26	-	38.81	0.07	-	38.81	0.07	-	-	-	-
	Fail	Pass	1	3.7%	7.00	0.02	-	10.00	0.05	-	-42.9%	-150.0%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		27	3.7%	37.63	0.07	-	37.74	0.07	-	-0.3%	-1.6%	-
1997 P	Pass	-	4	-	11.00	0.02	-	11.00	0.02	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		4	-	11.00	0.02	-	11.00	0.02	-	-	-	-
1998 P	Pass	-	26	-	38.88	0.07	-	38.88	0.07	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		26	-	38.88	0.07	-	38.88	0.07	-	-	-	-
1999 P	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
2000 P	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
2001 P	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
Total Passenger Vehicles				-	-	-	-	-	-	-	-	-	-
All	Pass	-	91	-	46.46	0.10	-	46.46	0.10	-	-	-	-
P	Fail	Pass	1	1.1%	7.00	0.02	-	10.00	0.05	-	-42.9%	-150.0%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		92	1.1%	46.03	0.10	-	46.07	0.10	-	-0.1%	-0.3%	-
1981 T	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1982	Pass	-	0	-	-	-	-	-	-	-	-	-	-

Appendix B2 Enhanced Idle Test Emissions Reductions - RapidScreen Audit Vehicles

Unresolved fails remaining in area						33%			Reduction %		
Model	First Result	Last Result	Vehicles	Fail%		Initial	Final		HC	CO	NOX
Year/Type						HC	CO	NOX	HC	CO	NOX
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1983	Pass	-	0	-	-	-	-	-	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1984	Pass	-	0	-	-	-	-	-	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1985	Pass	-	0	-	-	-	-	-	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1986	Pass	-	0	-	-	-	-	-	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1987	Pass	-	0	-	-	-	-	-	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1988	Pass	-	1	31.00	0.05	-	31.00	0.05	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		1	-	31.00	0.05	-	31.00	0.05	-	-
1989	Pass	-	0	-	-	-	-	-	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1990	Pass	-	0	-	-	-	-	-	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1991	Pass	-	0	-	-	-	-	-	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-
1992	Pass	-	2	69.50	0.12	-	69.50	0.12	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		2	-	69.50	0.12	-	69.50	0.12	-	-
1993	Pass	-	0	-	-	-	-	-	-	-	-
T	Fail	Pass	0	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-

Appendix B2 Enhanced Idle Test Emissions Reductions - RapidScreen Audit Vehicles

Unresolved fails remaining in area

Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Final			Reduction %		
					HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX
1994 T	Pass	-	15		33.33	0.10	-	33.33	0.10	-	-	-	-
	Fail	Pass	1	6.3%	22.00	-	-	34.00	0.01	-	-54.5%	-	-
	Fail	Unresolv.	0		-	-	-	-	-	-	-	-	-
	Fail	Waiver	0		-	-	-	-	-	-	-	-	-
Total	Fail%		16	6.3%	32.63	0.09	-	33.38	0.09	-	-2.3%	-0.7%	-
1995 T	Pass	-	1		21.00	0.07	-	21.00	0.07	-	-	-	-
	Fail	Pass	0		-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0		-	-	-	-	-	-	-	-	-
	Fail	Waiver	0		-	-	-	-	-	-	-	-	-
Total	Fail%		1	-	21.00	0.07	-	21.00	0.07	-	-	-	-
1996 T	Pass	-	13		55.77	0.14	-	55.77	0.14	-	-	-	-
	Fail	Pass	0		-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0		-	-	-	-	-	-	-	-	-
	Fail	Waiver	0		-	-	-	-	-	-	-	-	-
Total	Fail%		13	-	55.77	0.14	-	55.77	0.14	-	-	-	-
1997 T	Pass	-	3		55.00	0.11	-	55.00	0.11	-	-	-	-
	Fail	Pass	0		-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0		-	-	-	-	-	-	-	-	-
	Fail	Waiver	0		-	-	-	-	-	-	-	-	-
Total	Fail%		3	-	55.00	0.11	-	55.00	0.11	-	-	-	-
1998 T	Pass	-	70		34.23	0.14	-	34.23	0.14	-	-	-	-
	Fail	Pass	1	1.4%	6.00	-	-	7.00	-	-	-16.7%	-	-
	Fail	Unresolv.	0		-	-	-	-	-	-	-	-	-
	Fail	Waiver	0		-	-	-	-	-	-	-	-	-
Total	Fail%		71	1.4%	33.83	0.13	-	33.85	0.13	-	-0.0%	-	-
1999 T	Pass	-	4		8.50	-	-	8.50	-	-	-	-	-
	Fail	Pass	0		-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0		-	-	-	-	-	-	-	-	-
	Fail	Waiver	0		-	-	-	-	-	-	-	-	-
Total	Fail%		4	-	8.50	-	-	8.50	-	-	-	-	-
2000 T	Pass	-	0		-	-	-	-	-	-	-	-	-
	Fail	Pass	0		-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0		-	-	-	-	-	-	-	-	-
	Fail	Waiver	0		-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
2001 T	Pass	-	0		-	-	-	-	-	-	-	-	-
	Fail	Pass	0		-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0		-	-	-	-	-	-	-	-	-
	Fail	Waiver	0		-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
Total Trucks													
All	Pass	-	109		36.80	0.12	-	36.80	0.12	-	-	-	-
T	Fail	Pass	2	1.8%	14.00	-	-	20.50	0.00	-	-46.4%	#DIV/0!	-
	Fail	Unresolv.	0		-	-	-	-	-	-	-	-	-
	Fail	Waiver	0		-	-	-	-	-	-	-	-	-
Total	Fail%		111	1.8%	36.39	0.12	-	36.50	0.12	-	-0.3%	-0.1%	-
Fleet Total													
All	Pass	-	200		41.20	0.11	-	41.20	0.11	-	-	-	-
All	Fail	Pass	3	1.5%	11.67	0.01	-	17.00	0.02	-	-45.7%	-200.0%	-
	Fail	Unresolv.	0		-	-	-	-	-	-	-	-	-
	Fail	Waiver	0		-	-	-	-	-	-	-	-	-
Total	Fail%		203	1.5%	40.76	0.11	-	40.84	0.11	-	-0.2%	-0.2%	-

Appendix B3 Basic Idle Test Emissions Reductions

Unresolved fails remaining in area:

Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Final			Reduction %		
					HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX
1981	Pass	-	734	11.5%	187.12	1.50	-	187.12	1.50	-	-	-	-
	P	Fail			885.68	4.14	-	248.41	2.04	-	72.0%	50.7%	-
		Fail			1,226.85	3.46	-	413.17	1.05	-	66.3%	69.7%	-
		Fail			1,195.53	5.23	-	1,062.39	5.27	-	11.1%	-0.8%	-
Total	Fail%			21.0%	364.86	2.06	-	240.75	1.69	-	34.0%	18.2%	-
1982	Pass	-	103	17.4%	74.07	0.19	-	74.07	0.19	-	-	-	-
	P	Fail			282.20	2.02	-	82.32	0.24	-	70.8%	87.9%	-
		Fail			784.00	3.76	-	273.83	1.30	-	65.1%	65.4%	-
		Fail			378.50	6.55	-	434.50	5.77	-	-14.8%	12.0%	-
Total	Fail%			28.5%	172.19	1.02	-	104.39	0.51	-	39.4%	50.3%	-
1983	Pass	-	181	16.0%	65.91	0.15	-	65.91	0.15	-	-	-	-
	P	Fail			318.28	1.43	-	64.13	0.19	-	79.9%	86.8%	-
		Fail			656.71	2.85	-	207.43	0.95	-	68.4%	66.6%	-
		Fail			1,216.92	4.29	-	1,098.08	3.79	-	9.8%	11.6%	-
Total	Fail%			27.6%	201.71	0.74	-	124.79	0.39	-	38.1%	47.8%	-
1984	Pass	-	391	11.6%	85.05	0.19	-	85.05	0.19	-	-	-	-
	P	Fail			220.93	1.75	-	89.29	0.30	-	59.6%	82.7%	-
		Fail			579.75	3.64	-	197.23	1.25	-	66.0%	65.7%	-
		Fail			369.80	3.87	-	400.80	4.38	-	-8.4%	-13.1%	-
Total	Fail%			18.7%	131.48	0.62	-	97.71	0.35	-	25.7%	44.4%	-
1985	Pass	-	558	10.1%	75.28	0.18	-	75.28	0.18	-	-	-	-
	P	Fail			681.03	1.81	-	98.06	0.25	-	85.6%	86.4%	-
		Fail			621.00	3.61	-	227.24	1.26	-	63.4%	65.1%	-
		Fail			635.52	3.68	-	633.17	4.42	-	0.4%	-20.2%	-
Total	Fail%			18.2%	181.07	0.63	-	103.53	0.38	-	42.8%	38.9%	-
1986	Pass	-	786	9.0%	87.57	0.20	-	87.57	0.20	-	-	-	-
	P	Fail			335.98	2.03	-	83.54	0.21	-	75.1%	89.8%	-
		Fail			765.90	3.27	-	262.83	1.13	-	65.7%	65.4%	-
		Fail			689.35	4.57	-	701.10	4.26	-	-1.7%	6.7%	-
Total	Fail%			14.6%	145.92	0.56	-	106.45	0.32	-	27.0%	43.4%	-
1987	Pass	-	861	8.9%	82.12	0.18	-	82.12	0.18	-	-	-	-
	P	Fail			342.69	1.74	-	106.06	0.21	-	69.1%	87.8%	-
		Fail			579.41	3.60	-	178.04	1.09	-	69.3%	69.6%	-
		Fail			746.70	3.45	-	596.10	2.49	-	20.2%	27.8%	-
Total	Fail%			13.8%	133.08	0.48	-	97.33	0.25	-	26.9%	47.4%	-
1988	Pass	-	1,185	6.7%	79.08	0.19	-	79.08	0.19	-	-	-	-
	P	Fail			449.87	2.52	-	94.48	0.25	-	79.0%	90.1%	-
		Fail			914.46	3.29	-	306.58	1.06	-	66.5%	67.9%	-
		Fail			863.26	4.18	-	899.35	2.65	-	-4.2%	36.6%	-
Total	Fail%			10.6%	135.25	0.48	-	99.16	0.25	-	26.7%	47.3%	-
1989	Pass	-	1,552	5.3%	72.58	0.17	-	72.58	0.17	-	-	-	-
	P	Fail			325.91	2.08	-	98.46	0.23	-	69.8%	88.8%	-
		Fail			1,150.03	4.73	-	378.44	1.45	-	67.1%	69.3%	-
		Fail			835.81	2.97	-	552.33	3.17	-	33.9%	-6.8%	-
Total	Fail%			8.2%	113.87	0.38	-	85.15	0.23	-	25.2%	39.8%	-
1990	Pass	-	1,462	5.3%	72.95	0.17	-	72.95	0.17	-	-	-	-
	P	Fail			423.72	2.98	-	88.24	0.24	-	79.2%	92.0%	-
		Fail			821.40	4.82	-	264.07	1.57	-	67.9%	67.5%	-
		Fail			437.92	4.33	-	767.33	4.97	-	-75.2%	-14.8%	-
Total	Fail%			7.3%	103.68	0.41	-	81.47	0.23	-	21.4%	43.8%	-
1991	Pass	-	1,762	4.7%	72.44	0.16	-	72.44	0.16	-	-	-	-
	P	Fail			329.61	1.89	-	96.07	0.22	-	70.9%	88.5%	-
		Fail			1,020.26	2.22	-	339.50	0.70	-	66.7%	68.7%	-
		Fail			719.09	3.58	-	665.27	3.41	-	7.5%	4.7%	-
Total	Fail%			6.3%	97.97	0.28	-	79.73	0.19	-	18.6%	33.8%	-
1992	Pass	-	1,647	3.7%	58.90	0.13	-	58.90	0.13	-	-	-	-
	P	Fail			363.52	2.14	-	72.03	0.17	-	80.2%	92.0%	-
		Fail			975.36	2.45	-	307.83	0.65	-	68.4%	73.4%	-
		Fail			897.25	6.20	-	818.50	5.54	-	8.8%	10.5%	-

Appendix B3 Basic Idle Test Emissions Reductions

Unresolved fails remaining in area:

Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Final			Reduction %		
					HC	CO	NOX	HC	CO	NOX	HC	CO	NOX
Total	Fail%		1,726	4.6%	77.98	0.24	-	62.73	0.15	-	19.6%	36.1%	-
1993 P	Pass	-	2,058		56.18	0.12	-	56.18	0.12	-	-	-	-
	Fail	Pass	64	3.0%	350.91	1.86	-	84.86	0.19	-	75.8%	90.0%	-
	Fail	Unresolv.	6	0.3%	539.17	3.41	-	167.92	1.13	-	68.9%	66.8%	-
	Fail	Waiver	6	0.3%	621.17	2.22	-	1,462.33	2.56	-	-135.4%	-15.5%	-
Total	Fail%		2,134	3.6%	67.96	0.19	-	61.31	0.13	-	9.8%	30.0%	-
1994 P	Pass	-	1,786		42.20	0.08	-	42.20	0.08	-	-	-	-
	Fail	Pass	50	2.7%	181.24	1.12	-	52.82	0.14	-	70.9%	87.6%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	2	0.1%	438.00	0.27	-	608.00	0.29	-	-38.8%	-3.6%	-
Total	Fail%		1,838	2.8%	46.42	0.11	-	43.11	0.08	-	7.1%	24.2%	-
1995 P	Pass	-	2,405		37.02	0.06	-	37.02	0.06	-	-	-	-
	Fail	Pass	44	1.8%	102.02	0.59	-	40.93	0.08	-	59.9%	85.7%	-
	Fail	Unresolv.	3	0.1%	552.00	3.71	-	173.69	1.23	-	68.5%	66.8%	-
	Fail	Waiver	1	0.0%	582.00	10.76	-	567.00	10.39	-	2.6%	3.4%	-
Total	Fail%		2,453	2.0%	39.04	0.08	-	37.47	0.07	-	4.0%	15.2%	-
1996 P	Pass	-	1,772		25.30	0.04	-	25.30	0.04	-	-	-	-
	Fail	Pass	30	1.7%	108.83	0.50	-	37.83	0.08	-	65.2%	84.3%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		1,802	1.7%	26.69	0.05	-	25.51	0.04	-	4.4%	14.1%	-
1997 P	Pass	-	2,236		22.58	0.03	-	22.58	0.03	-	-	-	-
	Fail	Pass	19	0.8%	41.84	0.13	-	35.42	0.11	-	15.3%	16.1%	-
	Fail	Unresolv.	1	0.0%	200.00	0.47	-	66.00	0.16	-	67.0%	67.0%	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		2,256	0.9%	22.82	0.04	-	22.70	0.04	-	0.5%	0.9%	-
1998 P	Pass	-	1,604		20.94	0.03	-	20.94	0.03	-	-	-	-
	Fail	Pass	11	0.7%	11.00	0.00	-	8.91	0.01	-	19.0%	-200.0%	-
	Fail	Unresolv.	1	0.1%	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		1,616	0.7%	20.86	0.03	-	20.84	0.03	-	0.1%	-0.2%	-
1999 P	Pass	-	688		13.76	0.02	-	13.76	0.02	-	-	-	-
	Fail	Pass	4	0.6%	13.25	0.01	-	11.25	0.02	-	15.1%	-75.0%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		692	0.6%	13.76	0.02	-	13.75	0.02	-	0.1%	-0.3%	-
2000 P	Pass	-	191		17.35	0.01	-	17.35	0.01	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		191	-	17.35	0.01	-	17.35	0.01	-	-	-	-
2001 P	Pass	-	3		1.67	-	-	1.67	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		3	-	1.67	-	-	1.67	-	-	-	-	-
Total Passenger Vehicles													
All	Pass	-	23,965		55.54	0.15	-	55.54	0.15	-	-	-	-
P	Fail	Pass	1,105	4.3%	388.56	2.06	-	98.48	0.38	-	74.7%	81.5%	-
	Fail	Unresolv.	313	1.2%	855.34	3.52	-	285.42	1.13	-	66.6%	67.8%	-
	Fail	Waiver	207	0.8%	803.36	4.16	-	778.68	3.98	-	3.1%	4.5%	-
Total	Fail%		25,590	6.4%	85.75	0.31	-	66.06	0.20	-	23.0%	33.6%	-
1981 T	Pass	-	1,016		213.94	2.12	-	213.94	2.12	-	-	-	-
	Fail	Pass	220	15.1%	858.20	4.68	-	225.57	2.21	-	73.7%	52.7%	-
	Fail	Unresolv.	149	10.2%	1,198.32	4.23	-	437.89	1.38	-	63.5%	67.3%	-
	Fail	Waiver	70	4.8%	1,231.39	4.56	-	1,286.37	4.48	-	-4.5%	1.7%	-
Total	Fail%		1,455	30.2%	461.11	2.84	-	290.22	2.17	-	37.1%	23.5%	-

Appendix B3 Basic Idle Test Emissions Reductions

Unresolved fails remaining in area:

Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Final			Reduction %		
					HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX
1982	Pass	-	85		98.41	0.20	-	98.41	0.20	-	-	-	-
	T Fail	Pass	46	26.3%	393.76	1.97	-	88.57	0.33	-	77.5%	83.4%	-
	T Fail	Unresolv.	33	18.9%	925.94	3.33	-	374.83	1.06	-	59.5%	68.3%	-
	T Fail	Waiver	11	6.3%	761.45	3.21	-	945.82	5.14	-	-24.2%	-60.1%	-
Total	Fail%		175	51.4%	373.77	1.45	-	201.21	0.71	-	46.2%	51.1%	-
1983	Pass	-	140		87.53	0.26	-	87.53	0.26	-	-	-	-
	T Fail	Pass	101	33.9%	458.69	2.42	-	88.54	0.23	-	80.7%	90.5%	-
	T Fail	Unresolv.	35	11.7%	742.80	3.56	-	295.78	1.19	-	60.2%	66.6%	-
	T Fail	Waiver	22	7.4%	900.14	3.33	-	460.45	2.91	-	48.8%	12.5%	-
Total	Fail%		298	53.0%	350.28	1.61	-	139.86	0.56	-	60.1%	65.5%	-
1984	Pass	-	265		83.97	0.19	-	83.97	0.19	-	-	-	-
	T Fail	Pass	112	23.9%	526.84	2.87	-	88.62	0.27	-	83.2%	90.8%	-
	T Fail	Unresolv.	48	10.2%	794.50	3.39	-	248.53	1.08	-	68.7%	68.3%	-
	T Fail	Waiver	44	9.4%	974.52	4.14	-	966.09	3.27	-	0.9%	20.9%	-
Total	Fail%		469	43.5%	346.00	1.53	-	184.68	0.59	-	46.6%	61.4%	-
1985	Pass	-	395		78.50	0.19	-	78.50	0.19	-	-	-	-
	T Fail	Pass	149	23.4%	397.57	2.34	-	98.05	0.32	-	75.3%	86.1%	-
	T Fail	Unresolv.	52	8.2%	698.73	2.82	-	226.34	1.05	-	67.6%	62.8%	-
	T Fail	Waiver	40	6.3%	737.75	4.89	-	617.55	4.18	-	16.3%	14.5%	-
Total	Fail%		636	37.9%	245.42	1.20	-	129.07	0.54	-	47.4%	55.0%	-
1986	Pass	-	545		83.95	0.22	-	83.95	0.22	-	-	-	-
	T Fail	Pass	165	20.6%	384.82	1.87	-	96.47	0.28	-	74.9%	84.9%	-
	T Fail	Unresolv.	48	6.0%	809.17	3.00	-	261.22	0.98	-	67.7%	67.3%	-
	T Fail	Waiver	42	5.3%	602.69	4.69	-	598.21	3.97	-	0.7%	15.4%	-
Total	Fail%		800	31.9%	216.75	0.96	-	124.17	0.47	-	42.7%	50.7%	-
1987	Pass	-	697		85.95	0.19	-	85.95	0.19	-	-	-	-
	T Fail	Pass	104	12.1%	340.45	2.13	-	95.29	0.26	-	72.0%	87.7%	-
	T Fail	Unresolv.	28	3.3%	713.07	3.05	-	225.57	1.07	-	68.4%	64.8%	-
	T Fail	Waiver	28	3.3%	798.64	2.80	-	811.64	3.51	-	-1.6%	-25.4%	-
Total	Fail%		857	18.7%	160.61	0.61	-	115.36	0.34	-	28.2%	44.3%	-
1988	Pass	-	939		84.02	0.18	-	84.02	0.18	-	-	-	-
	T Fail	Pass	103	9.5%	341.45	1.89	-	109.96	0.36	-	67.8%	80.8%	-
	T Fail	Unresolv.	23	2.1%	585.13	2.17	-	199.78	0.67	-	65.9%	69.3%	-
	T Fail	Waiver	21	1.9%	720.90	2.63	-	644.71	2.95	-	10.6%	-12.5%	-
Total	Fail%		1,086	13.5%	131.37	0.43	-	99.78	0.26	-	24.0%	39.5%	-
1989	Pass	-	1,103		91.08	0.17	-	91.08	0.17	-	-	-	-
	T Fail	Pass	98	7.9%	421.23	2.00	-	116.18	0.28	-	72.4%	85.9%	-
	T Fail	Unresolv.	22	1.8%	810.41	4.04	-	262.29	1.33	-	67.6%	67.1%	-
	T Fail	Waiver	19	1.5%	646.32	2.14	-	638.05	2.17	-	1.3%	-1.3%	-
Total	Fail%		1,242	11.2%	138.37	0.42	-	104.46	0.23	-	24.5%	44.0%	-
1990	Pass	-	1,041		82.24	0.18	-	82.24	0.18	-	-	-	-
	T Fail	Pass	100	8.6%	277.08	1.32	-	93.36	0.28	-	66.3%	78.7%	-
	T Fail	Unresolv.	20	1.7%	553.95	1.95	-	156.27	0.72	-	71.8%	63.0%	-
	T Fail	Waiver	5	0.4%	951.00	2.96	-	690.80	3.77	-	27.4%	-27.6%	-
Total	Fail%		1,166	10.7%	110.77	0.32	-	87.07	0.22	-	21.4%	33.1%	-
1991	Pass	-	1,153		74.10	0.14	-	74.10	0.14	-	-	-	-
	T Fail	Pass	86	6.8%	251.65	1.11	-	86.86	0.18	-	65.5%	84.1%	-
	T Fail	Unresolv.	9	0.7%	607.89	3.13	-	196.94	1.11	-	67.6%	64.5%	-
	T Fail	Waiver	12	1.0%	579.58	5.19	-	535.75	3.51	-	7.6%	32.4%	-
Total	Fail%		1,260	8.5%	94.84	0.28	-	80.24	0.18	-	15.4%	33.9%	-
1992	Pass	-	1,282		71.64	0.13	-	71.64	0.13	-	-	-	-
	T Fail	Pass	82	6.0%	323.94	1.37	-	89.94	0.12	-	72.2%	91.5%	-
	T Fail	Unresolv.	2	0.1%	859.50	0.39	-	283.64	0.13	-	67.0%	67.0%	-
	T Fail	Waiver	4	0.3%	730.00	3.44	-	614.50	3.26	-	15.8%	5.2%	-
Total	Fail%		1,370	6.4%	89.81	0.21	-	74.63	0.13	-	16.9%	36.0%	-
1993	Pass	-	1,672		68.98	0.14	-	68.98	0.14	-	-	-	-
	T Fail	Pass	69	3.9%	348.06	1.78	-	82.49	0.16	-	76.3%	91.1%	-
	T Fail	Unresolv.	8	0.5%	758.75	2.53	-	288.54	0.83	-	62.0%	67.2%	-
	T Fail	Waiver	8	0.5%	859.63	7.11	-	657.38	6.72	-	23.5%	5.5%	-

Appendix B3 Basic Idle Test Emissions Reductions

Unresolved fails remaining in area:

Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Final			Reduction %		
					HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX
Total	Fail%		1,757	4.8%	86.68	0.24	-	73.19	0.17	-	15.6%	30.0%	-
1994 T	Pass	-	1,755		61.34	0.15	-	61.34	0.15	-	-	-	-
	Fail	Pass	54	3.0%	242.22	0.81	-	79.67	0.17	-	67.1%	79.6%	-
	Fail	Unresolv.	1	0.1%	412.00	0.22	-	135.96	0.07	-	67.0%	67.0%	-
	Fail	Waiver	1	0.1%	412.00	1.29	-	259.00	0.45	-	37.1%	65.1%	-
Total	Fail%		1,811	3.1%	67.12	0.17	-	62.03	0.15	-	7.6%	11.5%	-
1995 T	Pass	-	2,001		52.56	0.12	-	52.56	0.12	-	-	-	-
	Fail	Pass	60	2.9%	148.30	0.23	-	55.52	0.10	-	62.6%	57.8%	-
	Fail	Unresolv.	6	0.3%	952.17	1.87	-	318.34	0.78	-	66.6%	58.6%	-
	Fail	Waiver	7	0.3%	1,004.86	0.93	-	943.57	1.16	-	6.1%	-25.1%	-
Total	Fail%		2,074	3.5%	61.15	0.13	-	56.42	0.12	-	7.7%	4.8%	-
1996 T	Pass	-	1,550		29.91	0.08	-	29.91	0.08	-	-	-	-
	Fail	Pass	21	1.3%	38.43	0.09	-	26.71	0.03	-	30.5%	68.5%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		1,571	1.3%	30.02	0.08	-	29.87	0.08	-	0.5%	1.0%	-
1997 T	Pass	-	1,990		21.44	0.05	-	21.44	0.05	-	-	-	-
	Fail	Pass	21	1.0%	93.19	0.14	-	15.76	0.06	-	83.1%	52.3%	-
	Fail	Unresolv.	1	0.0%	15.00	-	-	4.95	-	-	67.0%	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		2,012	1.1%	22.19	0.05	-	21.38	0.05	-	3.7%	1.3%	-
1998 T	Pass	-	1,758		18.90	0.05	-	18.90	0.05	-	-	-	-
	Fail	Pass	6	0.3%	74.00	0.88	-	31.33	0.17	-	57.7%	80.8%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		1,764	0.3%	19.08	0.05	-	18.94	0.05	-	0.8%	4.7%	-
1999 T	Pass	-	688		16.02	0.04	-	16.02	0.04	-	-	-	-
	Fail	Pass	2	0.3%	38.50	0.11	-	15.00	-	-	61.0%	100.0%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		690	0.3%	16.08	0.04	-	16.01	0.04	-	0.4%	0.8%	-
2000 T	Pass	-	136		12.50	0.02	-	12.50	0.02	-	-	-	-
	Fail	Pass	1	0.7%	1.00	0.04	-	1.00	0.08	-	-	-100.0%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		137	0.7%	12.42	0.02	-	12.42	0.02	-	-	-1.4%	-
2001 T	Pass	-	4		26.75	0.07	-	26.75	0.07	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		4	-	26.75	0.07	-	26.75	0.07	-	-	-	-
Total Trucks													
All	Pass	-	20,215		64.43	0.22	-	64.43	0.22	-	-	-	-
T	Fail	Pass	1,600	7.1%	420.02	2.18	-	108.96	0.51	-	74.1%	76.4%	-
	Fail	Unresolv.	485	2.1%	886.90	3.39	-	310.74	1.13	-	65.0%	66.7%	-
	Fail	Waiver	334	1.5%	870.69	3.99	-	825.65	3.74	-	5.2%	6.2%	-
Total	Fail%		22,634	10.7%	119.08	0.49	-	84.09	0.32	-	29.4%	34.9%	-
Fleet Total													
All	Pass	-	44,180		59.61	0.18	-	59.61	0.18	-	-	-	-
All	Fail	Pass	2,705	5.6%	407.17	2.13	-	104.68	0.46	-	74.3%	78.4%	-
	Fail	Unresolv.	798	1.7%	874.52	3.44	-	300.81	1.13	-	65.6%	67.1%	-
	Fail	Waiver	541	1.1%	844.93	4.05	-	807.68	3.83	-	4.4%	5.5%	-
Total	Fail%		48,224	8.4%	101.40	0.39	-	74.52	0.26	-	26.5%	34.4%	-

Appendix B3 Basic Idle Test Emissions Reductions - RapidScreen Audit Vehicles

Unresolved fails remaining in area

Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Final			Reduction %		
					HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX
1981	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1982	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1983	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1984	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1985	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1986	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1987	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1988	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1989	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1990	Pass	-	2	77.50	0.06	-	77.50	0.06	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		2	77.50	0.06	-	77.50	0.06	-	-	-	-	-
1991	Pass	-	1	3.00	0.05	-	3.00	0.05	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-
Total	Fail%		1	3.00	0.05	-	3.00	0.05	-	-	-	-	-
1992	Pass	-	7	47.14	0.10	-	47.14	0.10	-	-	-	-	-
	P	Fail	Pass	0	-	-	-	-	-	-	-	-	-
	P	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-
	P	Fail	Waiver	0	-	-	-	-	-	-	-	-	-

Appendix B3 Basic Idle Test Emissions Reductions - RapidScreen Audit Vehicles

Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Final			Reduction %		
					Initial			CO					
					HC	CO	NOX	HC	CO	NOX	HC	CO	NOX
Total	Fail%		7	-	47.14	0.10	-	47.14	0.10	-	-	-	-
1993 P	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1994 P	Pass	-	16	-	23.06	0.03	-	23.06	0.03	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		16	-	23.06	0.03	-	23.06	0.03	-	-	-	-
1995 P	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1996 P	Pass	-	17	-	30.88	0.08	-	30.88	0.08	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		17	-	30.88	0.08	-	30.88	0.08	-	-	-	-
1997 P	Pass	-	1	-	17.00	-	-	17.00	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		1	-	17.00	-	-	17.00	-	-	-	-	-
1998 P	Pass	-	7	-	14.57	0.02	-	14.57	0.02	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		7	-	14.57	0.02	-	14.57	0.02	-	-	-	-
1999 P	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
2000 P	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
2001 P	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
Total Passenger Vehicles													
All	Pass	-	51	-	29.43	0.06	-	29.43	0.06	-	-	-	-
P	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
	Total	Fail%	51	-	29.43	0.06	-	29.43	0.06	-	-	-	-
1981 T	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-

Appendix B3 Basic Idle Test Emissions Reductions - RapidScreen Audit Vehicles

Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Final			Reduction %			
					HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX	
1982	Pass	-	0	-	-	-	-	-	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	
1983	Pass	-	0	-	-	-	-	-	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	
1984	Pass	-	0	-	-	-	-	-	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	
1985	Pass	-	0	-	-	-	-	-	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	
1986	Pass	-	0	-	-	-	-	-	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	
1987	Pass	-	0	-	-	-	-	-	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	
1988	Pass	-	0	-	-	-	-	-	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	
1989	Pass	-	0	-	-	-	-	-	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	
1990	Pass	-	1	157.00	0.75	-	157.00	0.75	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		1	157.00	0.75	-	157.00	0.75	-	-	-	-	-	
1991	Pass	-	0	-	-	-	-	-	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-	
1992	Pass	-	2	47.50	0.14	-	47.50	0.14	-	-	-	-	-	
	T	Fail	Pass	1	33.3%	133.00	0.63	-	21.00	0.10	-	84.2%	84.1%	-
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	
Total	Fail%		3	33.3%	76.00	0.30	-	38.67	0.13	-	49.1%	58.2%	-	
1993	Pass	-	0	-	-	-	-	-	-	-	-	-	-	
	T	Fail	Pass	0	-	-	-	-	-	-	-	-	-	
		Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	
		Fail	Waiver	0	-	-	-	-	-	-	-	-	-	

Appendix B3 Basic Idle Test Emissions Reductions - RapidScreen Audit Vehicles

Unresolved fails remaining in area

Model Year/Type	First Result	Last Result	Vehicles	Fail%	33%			Final			Reduction %		
					HC	Initial CO	NOX	HC	CO	NOX	HC	CO	NOX
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
1994 T	Pass	-	17	-	51.53	0.13	-	51.53	0.13	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		17	-	51.53	0.13	-	51.53	0.13	-	-	-	-
1995 T	Pass	-	1	-	16.00	0.02	-	16.00	0.02	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		1	-	16.00	0.02	-	16.00	0.02	-	-	-	-
1996 T	Pass	-	8	-	17.75	0.05	-	17.75	0.05	-	-	-	-
	Fail	Pass	1	11.1%	8.00	-	-	7.00	-	-	12.5%	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		9	11.1%	16.67	0.04	-	16.56	0.04	-	0.7%	-	-
1997 T	Pass	-	1	-	37.00	0.13	-	37.00	0.13	-	-	-	-
	Fail	Pass	1	50.0%	10.00	0.01	-	10.00	-	-	-	100.0%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		2	50.0%	23.50	0.07	-	23.50	0.06	-	-	7.1%	-
1998 T	Pass	-	14	-	14.93	0.01	-	14.93	0.01	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		14	-	14.93	0.01	-	14.93	0.01	-	-	-	-
1999 T	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
2000 T	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
2001 T	Pass	-	0	-	-	-	-	-	-	-	-	-	-
	Fail	Pass	0	-	-	-	-	-	-	-	-	-	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		0	-	-	-	-	-	-	-	-	-	-
Total Trucks													
All	Pass	-	44	-	34.82	0.09	-	34.82	0.09	-	-	-	-
T	Fail	Pass	3	6.4%	50.33	0.21	-	12.67	0.03	-	74.8%	84.4%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		47	6.4%	35.81	0.10	-	33.40	0.08	-	6.7%	12.0%	-
Fleet Total													
All	Pass	-	95	-	31.93	0.07	-	31.93	0.07	-	-	-	-
All	Fail	Pass	3	3.1%	50.33	0.21	-	12.67	0.03	-	74.8%	84.4%	-
	Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
	Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%		98	3.1%	32.49	0.08	-	31.34	0.07	-	3.5%	7.3%	-

Appendix B4 Tailpipe Test Emissions Reduction Summary

IM240 Emissions Reductions

First Result	Last Result	Vehicles	Fail %	Initial HC	Initial CO	Initial NOX	Final HC	Final CO	Final NOX	Reduction % HC	Reduction % CO	Reduction % NOX
Station Based Tests												
Pass	-	385,810	-	0.44	4.85	1.31	0.44	4.85	1.31	-	-	-
Fail	Pass	15,854	3.9%	2.69	37.53	2.32	0.84	9.85	1.98	68.6%	73.7%	14.6%
Fail	Unresolv.	4,339	1.1%	5.49	68.54	2.77	1.80	22.55	0.91	67.1%	67.1%	67.1%
Fail	Waiver	5,019	1.2%	5.29	70.59	2.80	4.69	65.36	2.72	11.2%	7.4%	2.7%
Total	Fail%	411,022	6.1%	0.64	7.59	1.38	0.52	5.97	1.35	18.4%	21.3%	2.4%
RapidScreen Audit Vehicles												
Pass	-	3,688	-	0.25	2.89	0.90	0.25	2.89	0.90	-	-	-
Fail	Pass	63	1.7%	0.96	10.70	1.52	0.37	5.05	1.27	61.2%	52.8%	16.3%
Fail	Unresolv.	5	0.1%	3.47	24.81	2.97	1.14	8.19	0.98	67.0%	67.0%	67.0%
Fail	Waiver	9	0.2%	3.06	31.82	3.82	2.77	24.02	3.07	9.7%	24.5%	19.7%
Total	Fail%	3,765	2.0%	0.28	3.12	0.92	0.26	2.98	0.91	4.9%	4.3%	0.9%

Enhanced Idle Emissions Reductions

First Result	Last Result	Vehicles	Fail %	Initial HC	Initial CO	Initial NOX	Final HC	Final CO	Final NOX	Reduction % HC	Reduction % CO	Reduction % NOX
Station Based Tests												
Pass	-	26,682	-	103	0.60	-	103	0.60	-	-	-	-
Fail	Pass	1,622	5.4%	794	3.21	-	201	1.35	-	74.7%	58.0%	-
Fail	Unresolv.	887	3.0%	1,043	3.32	-	346	1.11	-	66.8%	66.5%	-
Fail	Waiver	729	2.4%	1,192	3.73	-	1,155	3.48	-	3.1%	6.8%	-
Total	Fail%	29,920	10.8%	195	0.90	-	141	0.73	-	27.6%	19.2%	-
RapidScreen Audit Vehicles												
Pass	-	200	-	41	0.11	-	41	0.11	-	-	-	-
Fail	Pass	3	1.5%	12	0.01	-	17	0.02	-	-45.7%	-200.0%	-
Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%	203	1.5%	41	0.11	-	41	0.11	-	-0.2%	-0.2%	-

Basic Idle Emissions Reductions

First Result	Last Result	Vehicles	Fail %	Initial HC	Initial CO	Initial NOX	Final HC	Final CO	Final NOX	Reduction % HC	Reduction % CO	Reduction % NOX
Station Based Tests												
Pass	-	44,180	-	60	0.18	-	60	0.18	-	-	-	-
Fail	Pass	2,705	5.6%	407	2.13	-	105	0.46	-	74.3%	78.4%	-
Fail	Unresolv.	798	1.7%	875	3.44	-	301	1.13	-	65.6%	67.1%	-
Fail	Waiver	541	1.1%	845	4.05	-	808	3.83	-	4.4%	5.5%	-
Total	Fail%	48,224	8.4%	101	0.39	-	75	0.26	-	26.5%	34.4%	-
RapidScreen Audit Vehicles												
Pass	-	95	-	32	0.07	-	32	0.07	-	-	-	-
Fail	Pass	3	3.1%	50	0.21	-	13	0.03	-	74.8%	84.4%	-
Fail	Unresolv.	0	-	-	-	-	-	-	-	-	-	-
Fail	Waiver	0	-	-	-	-	-	-	-	-	-	-
Total	Fail%	98	3.1%	32	0.08	-	31	0.07	-	3.5%	7.3%	-

Appendix C – Annual IM240 Equivalent Tons

- **C1 – IM240 Tests**
- **C2 – Enhanced Idle Tests**
- **C3 – Basic Idle Tests**
- **C4 – Enhanced and Basic Reductions**

Appendix C Notes and Assumptions

Tons Per Year –Tons of emissions produced or eliminated by the vehicles tested during one year of travel assuming the IM240 driving cycle.

Does not include cold start emissions, off-cycle emissions, evaporative emissions, different driving cycles or the effects of speed and temperature corrections.

Example Calculations:

IM240 Results, 1981 Model Year Type P (LDGV)

Appendix B1: 615 vehicles in year with initial test average of 39.62 g/mi CO

VMT Table VII-6: 1981 LDGV = 5,420 miles / yr

Initial tons/yr CO: 615 vehicles x 39.62 g/mi CO x 5420 mi/yr / 907,186 g/ton = 145.6 tons/yr

Enhanced Idle Results, 1981 & older Type P (LDGV)

Appendix B2: 7,730 vehicles in year with initial test average of 352.56 ppm HC

Table VII-4: IM240 g/mi = $0.0121^* \times 352.56 \text{ ppm HC} - 0.4193 = 3.8312 \text{ g/mi HC}$

VMT Table VII-6: 1981 LDGV = 5,420 miles / yr

Initial tons/yr HC: 7,730 vehicles x 3.8312 g/mi HC x 5420 mi/yr / 907,186 g/ton = 176.9 tons/yr

* Actual value is 0.01206

Appendix C1
Enhanced IM240 Test Reductions

Type	Annual Miles	Unique Vehicles	Initial Tons/Yr			Final Tons/Yr			Reduction Tons/Yr		
			HC	CO	NOX	HC	CO	NOX	HC	CO	NOX
P 1981	5,420	615	8.7	145.6	8.1	5.2	86.3	7.1	3.5	59.3	1.0
P 1982	5,701	2,288	26.3	413.4	35.0	17.9	274.2	32.9	8.4	139.2	2.1
P 1983	5,997	1,397	16.6	257.8	21.9	11.1	159.4	20.3	5.5	98.4	1.6
P 1984	6,308	7,761	80.6	1,192.3	128.6	58.2	807.2	122.2	22.5	385.1	6.5
P 1985	6,636	3,804	48.3	634.0	63.7	32.9	399.1	60.0	15.4	234.9	3.7
P 1986	6,980	14,583	146.7	1,716.4	241.4	109.2	1,194.9	232.1	37.5	521.6	9.3
P 1987	7,342	6,048	60.5	680.5	106.0	43.2	444.4	101.8	17.3	236.1	4.2
P 1988	7,723	22,076	180.4	1,868.6	363.4	143.9	1,380.2	357.2	36.5	488.4	6.2
P 1989	8,124	9,339	79.7	812.7	157.7	63.6	596.4	155.1	16.1	216.3	2.6
P 1990	8,546	26,294	196.1	2,132.8	476.6	165.2	1,669.4	473.2	30.8	463.4	3.4
P 1991	8,989	10,588	69.1	860.5	165.2	53.3	631.9	155.0	15.8	228.5	10.2
P 1992	9,456	29,453	172.4	2,292.0	443.9	139.7	1,710.1	432.1	32.7	582.0	11.8
P 1993	9,947	11,848	65.1	839.7	170.8	54.2	661.7	166.3	10.9	178.0	4.4
P 1994	10,463	28,438	120.1	1,385.1	332.8	104.8	1,204.6	328.1	15.3	180.5	4.7
P 1995	11,006	13,918	47.3	549.9	133.9	42.1	488.2	132.2	5.2	61.6	1.6
P 1996	11,577	26,327	56.2	747.9	203.1	53.2	687.5	202.0	3.0	60.4	1.1
P 1997	12,178	15,757	29.0	374.1	106.1	28.0	350.8	105.8	1.0	23.3	0.3
P 1998	12,810	27,519	36.2	565.2	145.6	35.3	546.2	145.2	0.9	19.0	0.4
P 1999	13,475	15,155	15.7	259.9	65.4	14.9	245.2	65.4	0.8	14.7	0.1
P 2000	14,174	6,702	5.5	75.2	23.4	5.4	72.6	23.3	0.1	2.6	0.1
P 2001	14,910	150	0.1	1.2	0.4	0.1	1.2	0.4	0.0	0.0	0.0
P Total		280,060	1,460.7	17,804.8	3,393.0	1,181.5	13,611.4	3,317.5	279.2	4,193.3	75.5
T 1981	4,154	197	3.2	42.0	3.2	2.3	33.8	3.1	0.9	8.2	0.2
T 1982	4,588	993	16.7	208.0	16.0	12.6	176.1	14.8	4.1	31.9	1.2
T 1983	5,055	500	9.3	121.2	8.7	7.4	102.5	8.2	1.9	18.7	0.5
T 1984	5,556	2,836	44.7	646.9	48.4	32.1	482.1	45.8	12.6	164.8	2.6
T 1985	6,093	1,269	22.0	294.6	24.5	15.7	221.6	23.1	6.3	73.0	1.4
T 1986	6,663	5,907	85.6	1,074.4	117.6	66.1	872.9	113.1	19.5	201.5	4.5
T 1987	7,269	2,216	30.2	343.0	48.1	25.0	280.0	46.9	5.2	62.9	1.2
T 1988	7,911	8,831	113.5	1,098.3	209.6	91.8	911.6	199.2	21.7	186.6	10.4
T 1989	8,589	3,150	44.5	467.8	77.6	36.1	363.4	74.7	8.4	104.4	2.9
T 1990	9,305	10,168	123.9	1,282.8	265.1	106.8	1,068.2	259.0	17.1	214.6	6.1
T 1991	10,057	3,752	44.9	490.1	87.1	38.3	403.3	85.5	6.6	86.8	1.6
T 1992	10,849	12,767	146.9	1,516.9	351.8	132.0	1,330.4	346.4	14.9	186.5	5.4
T 1993	11,681	4,994	54.6	572.4	136.4	49.5	502.4	135.3	5.0	70.0	1.1
T 1994	12,553	14,690	134.6	1,385.7	373.8	128.2	1,325.4	369.4	6.4	60.2	4.4
T 1995	13,465	6,550	57.1	655.2	160.8	54.3	630.8	159.9	2.8	24.4	0.9
T 1996	14,420	13,544	51.2	696.8	208.5	49.0	660.2	204.9	2.2	36.6	3.6
T 1997	15,417	8,113	25.6	400.9	114.0	24.9	382.7	113.3	0.7	18.2	0.8
T 1998	16,459	18,393	45.0	660.9	225.4	44.5	643.9	224.4	0.5	17.1	0.9
T 1999	17,546	8,682	19.0	245.3	84.3	18.1	232.9	84.0	0.9	12.4	0.3
T 2000	18,680	3,320	5.3	67.0	24.1	5.3	66.9	24.1	0.0	0.1	0.0
T 2001	19,863	90	0.1	2.2	0.5	0.1	2.2	0.5	0.0	0.0	0.0
T Total		130,962	1,077.8	12,272.3	2,585.5	940.1	10,693.3	2,535.8	137.8	1,579.0	49.7
Total		411,022	2,538.5	30,077.1	5,978.5	2,121.6	24,304.8	5,853.3	416.9	5,772.3	125.2

Appendix C1
Enhanced IM240 Audit Reductions

Type	Annual Miles	Unique Vehicles	Initial Tons/Yr			Final Tons/Yr			Reduction Tons/Yr		
			HC	CO	NOX	HC	CO	NOX	HC	CO	NOX
P 1981	5,420	-	0.0	-	-	0.0	-	-	0.0	0.0	0.0
P 1982	5,701	1	0.0	0.2	0.01	0.0	0.2	0.01	0.0	0.0	0.0
P 1983	5,997	1	0.0	0.0	0.01	0.0	0.0	0.01	0.0	0.0	0.0
P 1984	6,308	2	0.0	0.1	0.04	0.0	0.1	0.04	0.0	0.0	0.0
P 1985	6,636	1	0.0	0.0	0.02	0.0	0.0	0.02	0.0	0.0	0.0
P 1986	6,980	18	0.1	1.5	0.32	0.1	1.1	0.30	0.0	0.3	0.0
P 1987	7,342	4	0.0	0.8	0.05	0.0	0.4	0.06	0.0	0.4	0.0
P 1988	7,723	54	0.3	3.3	0.70	0.3	3.1	0.68	0.0	0.2	0.0
P 1989	8,124	12	0.1	0.5	0.17	0.1	0.5	0.17	0.0	0.0	0.0
P 1990	8,546	171	0.8	7.5	3.01	0.8	7.2	3.01	0.0	0.3	0.0
P 1991	8,989	20	0.1	1.5	0.28	0.1	0.8	0.28	0.0	0.7	0.0
P 1992	9,456	229	0.9	9.5	2.98	0.8	9.4	2.92	0.0	0.1	0.1
P 1993	9,947	43	0.2	1.8	0.64	0.2	1.8	0.65	0.0	0.0	0.0
P 1994	10,463	465	1.7	18.2	5.29	1.5	17.6	5.16	0.2	0.7	0.1
P 1995	11,006	69	0.3	2.5	0.66	0.3	2.5	0.66	0.0	0.0	0.0
P 1996	11,577	601	1.2	16.3	4.81	1.2	15.2	4.82	0.0	1.1	0.0
P 1997	12,178	74	0.1	1.6	0.48	0.1	1.6	0.48	0.0	0.0	0.0
P 1998	12,810	629	0.8	11.5	3.19	0.7	11.2	3.16	0.1	0.3	0.0
P 1999	13,475	81	0.1	1.8	0.43	0.1	1.8	0.43	0.0	0.0	0.0
P 2000	14,174	-	0.0	-	-	0.0	-	-	0.0	0.0	0.0
P 2001	14,910	-	0.0	-	-	0.0	-	-	0.0	0.0	0.0
P Total		2,475	6.8	78.6	23.10	6.4	74.5	22.85	0.4	4.1	0.2
T 1981	4,154	-	0.0	-	-	0.0	-	-	0.0	0.0	0.0
T 1982	4,588	-	0.0	-	-	0.0	-	-	0.0	0.0	0.0
T 1983	5,055	-	0.0	-	-	0.0	-	-	0.0	0.0	0.0
T 1984	5,556	1	0.0	0.0	0.00	0.0	0.0	0.01	0.0	0.0	0.0
T 1985	6,093	-	0.0	-	-	0.0	-	-	0.0	0.0	0.0
T 1986	6,663	7	0.0	0.2	0.08	0.0	0.2	0.08	0.0	0.0	0.0
T 1987	7,269	1	0.0	0.0	0.01	0.0	0.0	0.01	0.0	0.0	0.0
T 1988	7,911	6	0.0	0.2	0.08	0.0	0.3	0.08	0.0	-0.1	0.0
T 1989	8,589	1	0.0	0.5	0.02	0.0	0.5	0.02	0.0	0.0	0.0
T 1990	9,305	27	0.2	2.7	0.67	0.2	2.7	0.66	0.0	0.1	0.0
T 1991	10,057	7	0.0	0.5	0.14	0.0	0.5	0.14	0.0	0.0	0.0
T 1992	10,849	117	1.1	10.8	2.98	1.0	10.3	2.97	0.1	0.4	0.0
T 1993	11,681	14	0.1	0.8	0.31	0.1	0.8	0.31	0.0	0.0	0.0
T 1994	12,553	294	2.4	23.1	6.16	2.2	21.9	6.02	0.1	1.2	0.1
T 1995	13,465	26	0.2	2.6	0.73	0.2	2.6	0.73	0.0	0.0	0.0
T 1996	14,420	291	0.8	11.4	4.11	0.8	11.5	4.14	0.0	-0.1	0.0
T 1997	15,417	44	0.1	2.2	0.65	0.1	2.2	0.66	0.0	-0.1	0.0
T 1998	16,459	396	0.8	12.2	4.50	0.8	12.2	4.49	0.0	0.0	0.0
T 1999	17,546	58	0.1	1.4	0.53	0.1	1.4	0.53	0.0	0.0	0.0
T 2000	18,680	-	0.0	-	-	0.0	-	-	0.0	0.0	0.0
T 2001	19,863	-	0.0	-	-	0.0	-	-	0.0	0.0	0.0
T Total		1,290	6.1	68.6	20.98	5.9	67.0	20.84	0.2	1.5	0.1
Total		3,765	12.8	147.1	44.07	12.2	141.6	43.69	0.6	5.6	0.4

Appendix C2
Enhanced Area Idle Test Reductions

Type	Annual Miles	Unique Vehicles	Initial Tons/Yr			Final Tons/Yr			Reduction Tons/Yr		
			HC	CO	NOX	HC	CO	NOX	HC	CO	NOX
P 1981	5,420	7,730	176.9	3,823.8		123.6	3,180.8		53.3	643.0	-
P 1982	5,701	126	2.5	31.4		1.2	18.1		1.3	13.3	-
P 1983	5,997	64	1.6	21.0		0.5	10.1		1.1	11.0	-
P 1984	6,308	250	3.2	61.0		2.2	25.3		1.0	35.7	-
P 1985	6,636	123	1.9	24.4		1.0	10.8		0.8	13.6	-
P 1986	6,980	334	6.4	75.5		3.1	38.8		3.3	36.7	-
P 1987	7,342	111	1.8	28.3		0.9	12.7		0.9	15.6	-
P 1988	7,723	301	3.6	41.5		2.6	37.4		1.0	4.1	-
P 1989	8,124	100	0.9	6.4		0.7	6.0		0.2	0.4	-
P 1990	8,546	404	3.0	33.7		2.5	23.9		0.5	9.8	-
P 1991	8,989	267	2.2	17.7		1.7	14.3		0.5	3.4	-
P 1992	9,456	1,184	6.5	90.3		5.1	61.7		1.4	28.6	-
P 1993	9,947	359	2.0	22.9		1.5	16.2		0.5	6.6	-
P 1994	10,463	1,436	4.3	53.1		4.1	51.9		0.2	1.1	-
P 1995	11,006	479	0.9	10.9		0.7	10.3		0.3	0.7	-
P 1996	11,577	1,285	0.1	10.3		-0.1	8.9		0.2	1.4	-
P 1997	12,178	658	0.1	1.6		0.0	-1.4		0.1	3.0	-
P 1998	12,810	1,675	-0.8	-6.7		-0.8	-6.5		0.0	-0.2	-
P 1999	13,475	600	-1.5	-5.1		-1.6	-6.8		0.1	1.8	-
P 2000	14,174	233	-1.0	-6.2		-1.0	-6.2		0.0	0.0	-
P 2001	14,910	13	-0.1	-0.3		-0.1	-0.3		0.0	0.0	-
P Total		17,732	214.6	4,335.5	-	147.8	3,506.0	-	66.9	829.5	-
T 1981	4,154	3,532	78.1	1,489.0		50.3	1,215.2		27.8	273.9	-
T 1982	4,588	137	2.6	31.4		1.6	17.8		1.0	13.6	-
T 1983	5,055	66	1.7	25.3		0.7	10.5		1.1	14.8	-
T 1984	5,556	251	4.6	79.4		2.8	43.2		1.9	36.2	-
T 1985	6,093	129	3.1	32.8		1.4	23.3		1.6	9.6	-
T 1986	6,663	429	8.5	96.6		5.8	55.9		2.7	40.7	-
T 1987	7,269	163	1.7	34.3		1.2	17.8		0.5	16.5	-
T 1988	7,911	452	7.1	80.5		4.8	51.5		2.3	29.0	-
T 1989	8,589	143	2.3	38.4		1.5	19.2		0.8	19.2	-
T 1990	9,305	332	4.4	57.1		3.3	35.3		1.1	21.9	-
T 1991	10,057	131	1.0	13.5		0.9	12.4		0.1	1.0	-
T 1992	10,849	406	5.1	39.3		3.9	33.6		1.2	5.7	-
T 1993	11,681	204	1.8	25.8		1.7	21.4		0.1	4.3	-
T 1994	12,553	853	7.0	120.6		6.4	101.8		0.6	18.8	-
T 1995	13,465	186	1.2	22.0		1.0	18.3		0.2	3.7	-
T 1996	14,420	943	1.5	46.1		1.5	45.9		0.0	0.2	-
T 1997	15,417	711	-0.1	16.9		-0.1	16.1		0.0	0.8	-
T 1998	16,459	2,206	-0.3	71.5		-0.5	70.5		0.2	1.0	-
T 1999	17,546	678	-0.7	11.2		-0.7	11.3		0.0	-0.1	-
T 2000	18,680	230	-0.6	1.2		-0.6	1.2		0.0	0.0	-
T 2001	19,863	6	0.0	(0.1)		0.0	(0.1)		0.0	0.0	-
T Total		12,188	129.9	2,332.8	-	86.6	1,822.0	-	43.3	510.8	-
Total		29,920	344.5	6,668.3	-	234.4	5,328.0	-	110.1	1,340.4	-

Appendix C2
Enhanced Area Idle Test RapidScreen Audit Reductions

Type	Annual Miles	Unique Vehicles	Initial Tons/Yr			Final Tons/Yr			Reduction Tons/Yr		
			HC	CO	NOX	HC	CO	NOX	HC	CO	NOX
P 1981	5,420	-	0.0	-		0.0	-		0.0	0.0	-
P 1982	5,701	-	0.0	-		0.0	-		0.0	0.0	-
P 1983	5,997	-	0.0	-		0.0	-		0.0	0.0	-
P 1984	6,308	-	0.0	-		0.0	-		0.0	0.0	-
P 1985	6,636	-	0.0	-		0.0	-		0.0	0.0	-
P 1986	6,980	-	0.0	-		0.0	-		0.0	0.0	-
P 1987	7,342	-	0.0	-		0.0	-		0.0	0.0	-
P 1988	7,723	1	0.0	(0.0)		0.0	(0.0)		0.0	0.0	-
P 1989	8,124	-	0.0	-		0.0	-		0.0	0.0	-
P 1990	8,546	4	0.0	(0.0)		0.0	(0.0)		0.0	0.0	-
P 1991	8,989	-	0.0	-		0.0	-		0.0	0.0	-
P 1992	9,456	10	0.1	0.7		0.1	0.7		0.0	0.0	-
P 1993	9,947	-	0.0	-		0.0	-		0.0	0.0	-
P 1994	10,463	19	0.0	1.1		0.0	1.1		0.0	0.0	-
P 1995	11,006	1	0.0	(0.0)		0.0	(0.0)		0.0	0.0	-
P 1996	11,577	27	0.0	0.3		0.0	0.3		0.0	0.0	-
P 1997	12,178	4	0.0	(0.1)		0.0	(0.1)		0.0	0.0	-
P 1998	12,810	26	0.0	0.4		0.0	0.4		0.0	0.0	-
P 1999	13,475	-	0.0	-		0.0	-		0.0	0.0	-
P 2000	14,174	-	0.0	-		0.0	-		0.0	0.0	-
P 2001	14,910	-	0.0	-		0.0	-		0.0	0.0	-
P Total		92	0.1	2.4	-	0.1	2.4	-	0.0	0.0	-
T 1981	4,154	-	0.0	-		0.0	-		0.0	0.0	-
T 1982	4,588	-	0.0	-		0.0	-		0.0	0.0	-
T 1983	5,055	-	0.0	-		0.0	-		0.0	0.0	-
T 1984	5,556	-	0.0	-		0.0	-		0.0	0.0	-
T 1985	6,093	-	0.0	-		0.0	-		0.0	0.0	-
T 1986	6,663	-	0.0	-		0.0	-		0.0	0.0	-
T 1987	7,269	-	0.0	-		0.0	-		0.0	0.0	-
T 1988	7,911	1	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1989	8,589	-	0.0	-		0.0	-		0.0	0.0	-
T 1990	9,305	-	0.0	-		0.0	-		0.0	0.0	-
T 1991	10,057	-	0.0	-		0.0	-		0.0	0.0	-
T 1992	10,849	2	0.0	0.1		0.0	0.1		0.0	0.0	-
T 1993	11,681	-	0.0	-		0.0	-		0.0	0.0	-
T 1994	12,553	16	0.0	0.6		0.0	0.6		0.0	0.0	-
T 1995	13,465	1	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1996	14,420	13	0.1	0.9		0.1	0.9		0.0	0.0	-
T 1997	15,417	3	0.0	0.2		0.0	0.2		0.0	0.0	-
T 1998	16,459	71	0.1	5.6		0.1	5.6		0.0	0.0	-
T 1999	17,546	4	0.0	(0.1)		0.0	(0.1)		0.0	0.0	-
T 2000	18,680	-	0.0	-		0.0	-		0.0	0.0	-
T 2001	19,863	-	0.0	-		0.0	-		0.0	0.0	-
T Total		111	0.2	7.4	-	0.2	7.4	-	0.0	0.0	-
Total		203	0.4	9.8	-	0.4	9.8	-	0.0	0.0	-

Appendix C3
Basic Area Idle Test Reductions

Type	Annual Miles	Unique Vehicles	Initial Tons/Yr			Final Tons/Yr			Reduction Tons/Yr		
			HC	CO	NOX	HC	CO	NOX	HC	CO	NOX
P 1981	5,420	929	28.4	441.9		18.0	359.1		10.5	82.8	-
P 1982	5,701	144	2.0	34.5		1.1	16.1		0.9	18.4	-
P 1983	5,997	250	4.4	44.6		2.4	21.5		1.9	23.1	-
P 1984	6,308	481	5.3	75.2		3.6	38.3		1.7	36.8	-
P 1985	6,636	682	11.6	112.4		5.7	64.2		5.9	48.2	-
P 1986	6,980	920	12.7	141.0		8.5	72.8		4.2	68.3	-
P 1987	7,342	999	12.9	135.7		8.6	62.6		4.4	73.1	-
P 1988	7,723	1,325	18.4	188.6		12.2	87.1		6.2	101.5	-
P 1989	8,124	1,691	19.8	193.0		13.2	102.3		6.6	90.7	-
P 1990	8,546	1,577	17.1	208.8		12.1	102.2		5.0	106.6	-
P 1991	8,989	1,881	19.9	166.6		14.7	95.8		5.2	70.8	-
P 1992	9,456	1,726	13.7	128.6		9.6	67.2		4.2	61.5	-
P 1993	9,947	2,134	14.3	118.4		12.0	66.7		2.4	51.7	-
P 1994	10,463	1,838	6.0	44.3		5.0	21.7		1.1	22.6	-
P 1995	11,006	2,453	5.2	26.8		4.4	12.3		0.7	14.5	-
P 1996	11,577	1,802	-0.3	-7.5		-0.7	-13.9		0.4	6.4	-
P 1997	12,178	2,256	-2.2	-27.4		-2.3	-27.8		0.1	0.4	-
P 1998	12,810	1,616	-2.3	-26.8		-2.3	-26.7		0.0	0.0	-
P 1999	13,475	692	-2.2	-16.8		-2.2	-16.8		0.0	0.0	-
P 2000	14,174	191	-0.5	-5.2		-0.5	-5.2		0.0	0.0	-
P 2001	14,910	3	0.0	-0.1		0.0	-0.1		0.0	0.0	-
P Total		25,590	184.3	1,976.5	-	123.1	1,099.2	-	61.2	877.3	-
T 1981	4,154	1,455	39.2	615.5		24.0	469.5		15.2	145.9	-
T 1982	4,588	175	4.2	41.3		2.1	19.9		2.0	21.5	-
T 1983	5,055	298	7.3	86.3		2.7	29.0		4.7	57.3	-
T 1984	5,556	469	12.5	141.9		6.3	53.4		6.2	88.5	-
T 1985	6,093	636	12.8	165.1		6.2	72.7		6.6	92.5	-
T 1986	6,663	800	15.4	180.6		8.1	86.8		7.3	93.7	-
T 1987	7,269	857	12.9	131.1		8.7	70.8		4.1	60.3	-
T 1988	7,911	1,086	14.0	127.1		10.1	74.2		4.0	52.9	-
T 1989	8,589	1,242	18.5	152.0		13.2	81.3		5.3	70.7	-
T 1990	9,305	1,166	14.4	117.3		10.7	75.6		3.8	41.8	-
T 1991	10,057	1,260	13.9	116.8		11.2	73.8		2.7	43.0	-
T 1992	10,849	1,370	15.2	101.1		11.9	60.4		3.3	40.7	-
T 1993	11,681	1,757	20.1	163.7		16.0	109.6		4.1	54.2	-
T 1994	12,553	1,811	15.7	122.2		14.0	106.0		1.7	16.2	-
T 1995	13,465	2,074	16.8	108.1		14.9	101.9		1.9	6.2	-
T 1996	14,420	1,571	3.3	47.2		3.2	46.5		0.1	0.6	-
T 1997	15,417	2,012	0.9	36.4		0.5	35.6		0.4	0.8	-
T 1998	16,459	1,764	-0.5	30.3		-0.6	27.8		0.1	2.5	-
T 1999	17,546	690	-0.7	7.2		-0.8	7.1		0.0	0.1	-
T 2000	18,680	137	-0.3	-0.2		-0.3	-0.2		0.0	0.0	-
T 2001	19,863	4	0.0	0.1		0.0	0.1		0.0	0.0	-
T Total		22,634	235.6	2,491.3	-	162.1	1,601.9	-	73.5	889.4	-
Total		48,224	419.9	4,467.8	-	285.2	2,701.0	-	134.7	1,766.8	-

Appendix C3
Basic Area Idle Test RapidScreen Audit Reductions

Type	Annual Miles	Unique Vehicles	Initial Tons/Yr			Final Tons/Yr			Reduction Tons/Yr		
			HC	CO	NOX	HC	CO	NOX	HC	CO	NOX
P 1981	5,420	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1982	5,701	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1983	5,997	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1984	6,308	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1985	6,636	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1986	6,980	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1987	7,342	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1988	7,723	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1989	8,124	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1990	8,546	2	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1991	8,989	1	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1992	9,456	7	0.0	0.1		0.0	0.1		0.0	0.0	-
P 1993	9,947	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1994	10,463	16	0.0	-0.2		0.0	-0.2		0.0	0.0	-
P 1995	11,006	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1996	11,577	17	0.0	0.2		0.0	0.2		0.0	0.0	-
P 1997	12,178	1	0.0	0.0		0.0	0.0		0.0	0.0	-
P 1998	12,810	7	0.0	-0.2		0.0	-0.2		0.0	0.0	-
P 1999	13,475	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 2000	14,174	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P 2001	14,910	-	0.0	0.0		0.0	0.0		0.0	0.0	-
P Total		51	0.0	-0.1	-	0.0	-0.1	-	0.0	0.0	-
T 1981	4,154	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1982	4,588	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1983	5,055	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1984	5,556	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1985	6,093	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1986	6,663	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1987	7,269	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1988	7,911	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1989	8,589	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1990	9,305	1	0.0	0.2		0.0	0.2		0.0	0.0	-
T 1991	10,057	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1992	10,849	3	0.0	0.3		0.0	0.1		0.0	0.2	-
T 1993	11,681	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1994	12,553	17	0.1	0.8		0.1	0.8		0.0	0.0	-
T 1995	13,465	1	0.0	0.0		0.0	0.0		0.0	0.0	-
T 1996	14,420	9	0.0	0.1		0.0	0.1		0.0	0.0	-
T 1997	15,417	2	0.0	0.1		0.0	0.0		0.0	0.0	-
T 1998	16,459	14	0.0	-0.1		0.0	-0.1		0.0	0.0	-
T 1999	17,546	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 2000	18,680	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T 2001	19,863	-	0.0	0.0		0.0	0.0		0.0	0.0	-
T Total		47	0.1	1.4	-	0.1	1.2	-	0.0	0.2	-
Total		98	0.1	1.4	-	0.1	1.1	-	0.0	0.2	-

Appendix C4
Enhanced and Basic IM240 Equivalent Tons Per Year Reduction

Type	Unique Vehicles	HC Tons/Year			CO Tons/Year			NOx Tons/Year		
		After I/M Emissions	Enhanced Reduction	Basic Reduction	After I/M Emissions	Enhanced Reduction	Basic Reduction	After I/M Emissions	Enhanced Reduction	Basic Reduction
P 1981	9,274	147	57	10	3,626	702	83	7	1	-
P 1982	2,558	20	10	1	308	153	18	33	2	-
P 1983	1,711	14	7	2	191	109	23	20	2	-
P 1984	8,492	64	23	2	871	421	37	122	6	-
P 1985	4,609	40	16	6	474	248	48	60	4	-
P 1986	15,837	121	41	4	1,306	558	68	232	9	-
P 1987	7,158	53	18	4	520	252	73	102	4	-
P 1988	23,702	159	37	6	1,505	493	102	357	6	-
P 1989	11,130	78	16	7	705	217	91	155	3	-
P 1990	28,275	180	31	5	1,795	473	107	473	3	-
P 1991	12,736	70	16	5	742	232	71	155	10	-
P 1992	32,363	154	34	4	1,839	611	61	432	12	-
P 1993	14,341	68	11	2	745	185	52	166	4	-
P 1994	31,712	114	16	1	1,278	182	23	328	5	-
P 1995	16,850	47	5	1	511	62	15	132	2	-
P 1996	29,414	52	3	0	682	62	6	202	1	-
P 1997	18,671	26	1	0	322	26	0	106	0	-
P 1998	30,810	32	1	0	513	19	0	145	0	-
P 1999	16,447	11	1	0	222	16	0	65	0	-
P 2000	7,126	4	0	0	61	3	0	23	0	-
P 2001	166	0	0	0	1	0	0	0	-	-
P Total	323,382	1,452	346	61	18,217	5,023	877	3,318	76	-
T 1981	5,184	77	29	15	1,719	282	146	3	0	-
T 1982	1,305	16	5	2	214	46	21	15	1	-
T 1983	864	11	3	5	142	33	57	8	1	-
T 1984	3,556	41	14	6	579	201	88	46	3	-
T 1985	2,034	23	8	7	318	83	92	23	1	-
T 1986	7,136	80	22	7	1,016	242	94	113	5	-
T 1987	3,236	35	6	4	369	79	60	47	1	-
T 1988	10,369	107	24	4	1,037	216	53	199	10	-
T 1989	4,535	51	9	5	464	124	71	75	3	-
T 1990	11,666	121	18	4	1,179	236	42	259	6	-
T 1991	5,143	50	7	3	490	88	43	86	2	-
T 1992	14,543	148	16	3	1,424	192	41	346	5	-
T 1993	6,955	67	5	4	633	74	54	135	1	-
T 1994	17,354	149	7	2	1,533	79	16	369	4	-
T 1995	8,810	70	3	2	751	28	6	160	1	-
T 1996	16,058	54	2	0	753	37	1	205	4	-
T 1997	10,836	25	1	0	434	19	1	113	1	-
T 1998	22,363	43	1	0	742	18	3	224	1	-
T 1999	10,050	17	1	0	251	12	0	84	0	-
T 2000	3,687	4	0	0	68	0	0	24	0	-
T 2001	100	0	0	0	2	0	0	0	-	-
T Total	165,784	1,189	181	73	14,117	2,090	889	2,536	50	-
Total	489,166	2,641	527	135	32,334	7,113	1,767	5,853	125	-

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